

Infantry

January-April 2000



The X Corps Evacuation of the Wonsan Beachhead (Page 20)
The Battle for Coco Solo: Panama, 1989 (Page 23)

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Volume 90, Number 1

20 THE X CORPS EVACUATION OF THE WONSAN BEACHHEAD

Major Anthony R Garrett, U.S. Army, Retired

23 THE BATTLE FOR COCO SOLO: Panama, 1989

Major Evan A. Huelfer

DEPARTMENTS

1 COMMANDANT'S NOTE

3 LETTERS

4 INFANTRY NEWS

6 PROFESSIONAL FORUM

6 THE 10TH MOUNTAIN DIVISION: Training from the Ground Up

Master Sergeant G.F. Welch

10 ESTABLISHING AND USING THE BRIGADE RECONNAISSANCE TROOP

Captain Ross F. Lightsey

15 THE ANTITANK SECTION IN SUPPORT OF A LIGHT INFANTRY RIFLE PLATOON

Captain Charles L. Hiter

17 ESSENTIAL TO SOLDIER CARE: The Commander and the Chaplain

Colonel William V. Wenger

Chaplain (Colonel) James P. Crews

33 TRAINING NOTES

33 "ON THE STAFF": Success Through Teamwork

Lieutenant Colonel Richard D. Hooker, Jr.

36 THE ART OF LAND NAVIGATION: GPS Has Not Replaced Planning

Lieutenant Colonel Raymond Millen

43 ORGANIZATION AND TRAINING FOR MECHANIZED RIFLE SQUADS IN RESTRICTIVE TERRAIN

Captain Gregory L. Joachim

46 MORTAR SHORT-RANGE TRAINING ROUNDS: Cost Effective, But Misunderstood

Captain Gary D. Jones

49 BOOK REVIEWS

FRONT COVER: Elements of 2d Battalion, 27th Infantry, 25th Infantry Division, prepare to move out against the Chinese Communists as Task Force Punch is launched, ten miles southwest of Seoul, Korea, 5 February 1951.

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Commandant's Note

MAJOR GENERAL JOHN M. Le MOYNE Chief of Infantry

THE INTERIM BRIGADE COMBAT TEAMS—CLOSING THE GAP

Fellow Infantrymen: I'd like to take this opportunity to update you on a number of things going on here at Fort Benning to support the Army Transformation program. Things are moving at a fast pace as we follow up on insights gained during the Joint Contingency Force Army Warfighting Experiment (AWE), begin work on the Light Forces Modernization Plan to frame future Infantry modernization requirements, support the 4th Infantry Division Capstone Exercise (DCX), and continue our work with the Interim Brigade Combat Team (IBCT) leadership at Fort Lewis and the other proponent schools to finalize the design and operational concept of the IBCT. At the same time, we are continuing to instruct courses to our Infantry noncommissioned officers and officers, and we continually work to improve Infantry systems to enhance Infantry lethality, survivability, and mobility. We welcome your input and feedback as we move forward in these important endeavors. In this note, I'd like to take some time to update you on the new Brigade Combat Teams (BCTs) at Fort Lewis.

As many of you know, the first BCT is the 1st Brigade, 2d Infantry Division, commanded by Colonel Steve Bailey. Currently, while the units wait to find out which of several candidate vehi-

cles will be selected for the brigade, they are training on loaner and surrogate vehicles from the U.S. and Canada. This loaner vehicle concept has enabled the brigade to get started on collective training, and they are well on its way to meeting its Initial Operational Capable (IOC) date of December 2001. The two Infantry battalions (1-23 INF and 5-20 INF) have already been converted to the new organization, and the third Infantry battalion will be organized and on the ground by this June. These battalions are built around strong Infantry platoons and squads, and each battalion will put more than 500 Infantry soldiers on the ground. The 1st BCT's armor battalion has also started transition. This battalion was redesignated as a Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron (1-14 CAV). When fully enabled, the RSTA Squadron will provide the brigade the enhanced situational awareness required to be successful on the battlefield. The other elements of the brigade are transitioning as well. The 2d BCT, the 1st Bde/25ID, has begun the process of turning in its old equipment. Organizationally, the transforming of these initial BCTs is well under way!

With input and help from many of you, we at the Infantry School remain committed to ensuring the

best possible transformation of the BCTs. Our Assistant Commandant, Brigadier General Paul Eaton, recently left Fort Benning to take Major General Dubik's position as Deputy TRADOC Commander for Transition in charge of the Brigade Coordination Cell, at Fort Lewis. With his recent field experience, both heavy and light, General Eaton is well equipped for this job and we look forward to working with his team at Fort Lewis as we move forward. He already has a broad foundation of what's needed for this transformation to be successful. In addition to our early work to develop the organization and operational concept for the BCT, we recently sent instructors and mobile training teams from all the major units on Fort Benning to Fort Lewis to work with the brigade leadership in the Tactical Leader's Course (TLC) and to assist in the brigade train up. NCOs from the Ranger Training Brigade and the 29th Infantry Regiment have instructed the Infantry battalion personnel in combatives, mortar, and sniper training. All these are skills essential to the BCT's ability to successfully accomplish the traditional Infantry mission of closing with and destroying the enemy.

While the work continues at Fort Lewis, training

and doctrine developers here at Fort Benning are hard at work updating the field manuals, mission training plans, and tactics, techniques, and procedures (TTPs) for use at Fort Lewis to ensure that they reflect the current operational concepts and training requirements of the brigade. Along with the brigade leadership, our combat developers are fine-tuning the BCT TOE to ensure that it meets the requirements of the organization and operations documents that spell out the BCT capabilities and fighting concepts.

These are exciting times for the Infantry. By the time you read this, the Army leadership will have announced its decision concerning the vehicle selections for the BCT, and the final process of refining doctrine, TTPs, and organizational design for the initial BCTs will have begun. This is only the first step in achieving the Chief of Staff of the Army's vision to transform our Army into a more lethal, mobile capable force, but rest assured the Infantry remains at the cornerstone of our future Army. I encourage you to follow the progress of this effort as we move forward, and I look forward to hearing from you and sharing your insights.

FOLLOW ME!!



INFANTRY NEWS



6mm CARTRIDGE CONCEPT FACES TOO MANY OBSTACLES

I am writing in response to the excellent article titled "Is 6mm the Optimum Caliber?" by Stanley C. Crist, in your September-December 1999 issue.

Mr. Crist's article makes sense as far as weapon performance goes, but to implement his concept we would have to declare our entire inventory of small arms and ammunition obsolete, replace them at tremendous expense, develop the replacement weapons, pay for an entire inventory of new small arms guns and ammunition, and institute new training. "Our" ammo and weapons have NATO Standardization Agreements (STANAGs) behind them, agreements signed by the United States and other NATO countries.

The changeover to a new caliber (and new weapons) could not be done quickly, if done at all, and for a long period of time we would have three different rounds in use and turmoil in our inventories.

Such a decision would affect not only the United States, but NATO nations and others that have bought U.S. guns and ammunition, as well as other countries which have bought weapons that use the current 7.62mm and 5.56mm ammo. Many of the NATO nations would argue that we forced the 5.56mm ammo on them, as we did the 7.62mm ammo, and now want to force a 6mm round on them.

Neither the money nor the will is there. Mr. Crist is a gifted and creative person whose articles have been excellent. This article is excellent, too, but I believe that a 6mm cartridge is a non-starter.

DON LOUGHLIN
Lynden, Washington

AUTHOR'S RESPONSE

The 6mm cartridge may indeed be a "nonstarter," but not for most of the reasons Mr. Loughlin cites. As I see it, two factors are serious obstacles to the implementation of the 6mm concept in the near future: First, although they are not the best possible calibers, 5.56mm and 7.62mm weapons do deliver usable performance, so it may not be cost effective to replace them while they are still serviceable; and, second, the objective individual combat weapon (OICW),—if its very challenging design goals can be achieved—will render rifles of any caliber obsolete.

The adoption of a 6mm cartridge is probably dependent upon the reemergence of a desire for a common caliber for rifles and machineguns. This change in attitude has happened before and could happen again, especially if the OICW does not enter service.

The expense of a changeover ought to be manageable and affordable, because 6mm weapons would cost a fraction of the price of the OICW. If the OICW is not acquired, more than enough money should be available to buy 6mm rifles and machineguns.

It is true that for a time there would be three calibers in the system. This is hardly an insurmountable problem, however, since the Army accomplished just such a task during the changeover from .30-06 and .30-caliber Carbine to 7.62 NATO.

While NATO STANAGs might impede the adoption of 6mm, they would not necessarily prevent it. The 5.56mm became the Army's primary rifle caliber at a time when it was not NATO standard, so a third rifle caliber could probably also be pushed through, if the leaders considered its advantages worth the effort. This could conceivably come about because of the increased emphasis

on urban combat in recent years.

Like the 5.45mm Russian round, 5.56mm NATO Ball has little ability to defeat many barriers (such as bricks, concrete blocks, lumber, automobiles, etc.) that are common to the urban battleground. After their experience in Chechnya, the Russians are reportedly so dissatisfied with the performance of the 5.45x39mm that there is a move back to the older 7.62x39mm. If the U.S. Army is serious about preparing for the urban fight, is it wise to continue arming U.S. infantrymen with a rifle and light machinegun that can't punch holes through the enemy's cover?

To be sure, the adoption of the 6mm Optimum would be much easier if the United States were not part of a huge alliance. This is why I wrote that the Army missed a "golden opportunity" in the post-World War II years—the one time when 6mm could easily have been made the NATO standard. Since it would have been more in accord with British and Belgian desires for an intermediate cartridge, 6mm would probably have been accepted without the acrimony that accompanied the adoption of the 7.62x51.

Incidentally, there was one other period when the Army missed a chance to adopt a 6mm round. A hundred years ago, the Army and Navy decided to standardize their small arms. For a number of seemingly good reasons, the .30-caliber Army cartridge (which was obsolete even before 1899) became the standard, even though the 6mm Navy round was a more modern, technologically advanced design. If the 6mm Navy cartridge had been selected, and properly developed, U.S. armed forces would have had a nearly ideal rifle and machinegun caliber for the past century.

STANLEY C. CRIST
Lancaster, California

INFANTRY LETTERS



THE 2001 INFANTRY CONFERENCE will be held at Fort Benning, Georgia, 11-14 June 2001.

Specifics on the agenda will be available on the Infantry Center web site beginning 15 March 2001.

THE UNITED STATES ARMY PHYSICAL Fitness School will name its facility at Fort Benning *Koehler Hall*, in honor of Lieutenant Colonel Herman J. Koehler, who is known as the Father of U.S. Army Physical Training.

In 1885, Koehler was appointed Master of the Sword, responsible for physical education, at the United States Military Academy. The Army had been looking for a world-class physical educator, and Koehler was ideally suited for the USMA position. By the time he retired in 1923, he had established a standard for PT that is still second to none.

His first program at West Point included scientific measurements of the body as well as strength tests to monitor progress. He also developed the first Army PT instructors' course and wrote the Army's first PT manual.

During World War I he directed PT in the Officers and Divisional Training Camps of the National Army, often leading an entire brigade of 6,000 men in calisthenics. In addition, Koehler assisted in the physical instruction of the New York and Massachusetts National Guard regiments and helped create the recruit school of the New York Police Department in 1913.

Koehler Hall will stand as a fitting reminder of the contributions Koehler made to the Army's physical readiness.

THE BRADLEY FIGHTING VEHICLE has been modernized in response to emerging Force XXI doctrine. Over the next

few years, two upgraded versions of the Bradley will be fielded to all six heavy divisions in the Active Army.

The first phase of the modernization effort is the M2A2 Operation *Desert Storm* (ODS) Bradley, and the second phase is the M2A3 Bradley.

The M2A2 ODS emerged from a plan designed to include needed improvements noted during Operation *Desert Storm* and to implement lessons learned from ten years of experience.

ODS improvements consist of off-the-shelf technology that provides capabilities required for Force XXI operations. They increase system lethality over the M2A2 by providing an eyesafe laser range finder that allows rapid, accurate calls for fire. The vehicle crew is also more survivable because of the improved ability to integrate the battle-field combat identification system (BCIS) and the missile countermeasure device. Finally, each ODS will eventually be equipped with Force XXI Battle Command, Brigade and Below (FBCB2) to support improved command and control and situational awareness.

The M2A3 Bradley emerged as a result of a threat and capabilities assessment, designed to ensure that the Infantry can overmatch the threat on the future battlefield.

The A3 is the first IFV that is technologically equal to the Abrams tank; and it integrates the Army's horizontal technical integration initiatives such as second generation forward looking infrared (FLIR).

The M2A3 insures overmatch by increasing the ability to acquire, identify, and engage over the A2 ODS, in both day and night operations. It allows the crew to acquire more targets faster by adding a second sight for the commander. The improved Bradley acquisition system allows the crew to engage

targets faster and more accurately by enabling first burst on target, eliminating the need for a sensing round. The positive navigation system improves the crew's navigational capability.

Fielding of the M2A3 to the 1st Cavalry Division will begin in the summer of 2001, followed by the 3d Armored Cavalry Regiment and the remainder of the 4th Infantry Division.

THE IMPROVED PHYSICAL FITNESS Uniform (IPFU) is replacing the current physical fitness uniform (PFU) as a clothing bag item. Effective 15 August 2000, the IPFU will be issued from clothing initial issue points (CIIPs) to soldiers undergoing initial entry training (IET), and will be available for purchase in all Army Military Clothing Sales Stores by all other active duty soldiers.

The U.S. Army National Guard and U.S. Army Reserve will begin issue-in-kind in October 2000; and reserve component soldiers undergoing IET will receive the uniforms through the CIIPs.

The IPFU ensemble consists of a gray and black jacket; black pants; black, moisture-wicking trunks; a gray, moisture-wicking short-sleeved T-shirt; and a gray, moisture-wicking, long-sleeved T-shirt.

An IET soldier will receive from the CIIPs three pairs of trunks, two long-sleeved T-shirts, three short-sleeved T-shirts, two gray sweatpants, and two gray sweatshirts (these are different from the current PFU sweatshirts and sweatpants). The sweatpants and sweatshirts will be issued at the CIIPs only and will not be available for purchase. IET soldiers will receive the IPFU jacket and pants from the CIIPs during Phase II of basic combat training.

By 1 October 2003, each soldier must

have one jacket, one pair of pants, two pairs of trunks, two short-sleeved T-shirts, and one long-sleeved T-shirt. The wearout date for the current PFU is 30 September 2003.

Each item of the IPFU ensemble is identified by a national stock number (NSN) and a Defense Logistics Agency contract number printed on a label sewn into the garment. If the label does not contain this information, the garment is not the one authorized.

The following is the Army's wear policy for the IPFU:

Authorized Accessories:

- Black knit cap.
- Commanders may authorize the wear of commercial running shoes; calf-length or ankle-length plain white socks (with no logos); gloves; reflective belts or vests; long underwear; and other items appropriate to the weather conditions and type of activity. If soldiers wear long underwear or similar items, jacket and pants must conceal them.

- Soldiers may not mix or match IPFU and PFU items. When wearing the IPFU as a complete uniform, soldiers will keep the jacket sleeves rolled down, the pants legs down, and the shirt tucked inside the trunks. Standards of wear and appearance specified in Paragraphs 1-7 and 1-8 of AR 670-1 apply at all times when wearing the IPFU as a complete uniform.

Occasions for wear:

- The IPFU is authorized for wear on and off duty, on and off the installation, when authorized by the commander.

- The IPFU is authorized for wear in transit between an individual's quarters and duty station.

- Soldiers may wear all or parts of the IPFU, on or off the installation, when authorized by the commander.

- The only insignia authorized for wear on the IPFU is the Physical Fitness Badge. When the badge is worn, it is sewn on the upper left front side of the IPFU T-shirt and jacket. (See AR 600-8-22 for criteria for the wear of the Physical Fitness Badge.)

- Commanders should expect to see both uniforms (the PFU and the IPFU) in their formations until all soldiers acquire the IPFU by the mandatory possession date of 1 October 2003 (FY 04).

This information will be incorporated into the revision of AR 670-1.

THE IMPROVED TOXICOLOGICAL AGENT Protective ensemble (known as ITAP) offers better protection against toxic chemicals and is more comfortable to wear. The ITAP will replace the M3 Toxicological Agents Protective suit, which has been the standard protection for almost 40 years.

The one-piece suit is composed of a self-contained breathing apparatus (SCBA), a personal ice cooling system (PICS), and a compact air supply system (CASS) when a filtered mode is required. One major improvement is the one-piece garment with integral boots, front fastener closure, and glove assembly. It has a splash-proof zipper with closure in the upper portion of the body, a splash hood, and an over-vest to cover the breathing system.

The suit is a modified commercial item made of five alternating layers of Nomex and Teflon. The second layer of the encapsulating suit is orange, so the users can visually tell if the suit is deteriorating. The material provides up to one hour of protection against chemical warfare agents, industrial chemicals, petroleum, oils, and lubricants. It dissipates static charges, is self-extinguishing and flame resistant, and its light gray color reduces its solar load for improved user comfort.

The PICS removes heat from the user's body with a closed-loop cooling system that uses ice water as a coolant. It consists of a pump unit, plastic bottle, connecting hose and tubing, suit pass-through, and a shirt with tubing running throughout.

The CASS is a small, lightweight unit that provides a continuous flow of clean, filtered air for breathing. The system is designed for use with the standard M40 NBC.

The SCBA is used when the suit is configured for Level B assignments. Approved by the National Institute for Occupational Safety and Health, the apparatus is used by Army and Air Force firefighters. It consists of a 60-minute air cylinder, breathing valve, pressure gauge, connective hose and

tubing, shoulder harness, and waist belt. It is worn over the ITAP suit and weighs about 35 pounds. It will be used as an alternative to the CASS when a higher level of respiratory protection is required than an air mode can provide.

THE BARE BASE COMMAND and Control Module is a shelter complex designed in response to the demand for a rapidly deployable command post for logistics support elements. The module then developed into a highly mobile command post for various field purposes.

The command and control module is made up of type-classified components integrated into an advanced full-service system. It uses the modular general purpose tent system, which will replace the old general purpose tents. These tents, combined with components, serve as the primary building blocks of the command module.

The complex comprises five medium modular tents, each consisting of two end caps and an intermediate section, 18 feet by 36 feet. The tents can be constructed in various arrangements to adapt to various types of terrain.

The arrangement of five medium modular tents provides 3,400 square feet of work and living space and accommodates up to 32 soldiers. To ensure quick setup and minimal footprint, the command and control module is designed for complete assembly by eight soldiers in less than four hours.

The program was expanded to a forward operating base system with various reach-back modules. These are available through the "commander's menu" concept, which consists of a number of module designs available with the base system program to improve the quality of soldier living conditions, efficiency, and productivity.

The commander's menu is composed of the command and control module, shower and ration modules, winter and summer modules, a "plus up" billeting module, marge area maintenance shelters, and a deployment team. All components of the commander's menu are currently available except for the shower and ration modules, which have already reached prototyping stages.

PROFESSIONAL FORUM



The 10th Mountain Division Training from the Ground Up

MASTER SERGEANT G.F. WELCH

In 1941 the Active Army of the United States had more than 1.5 million men in uniform. The nation's entry into the war came as little surprise to our nation's civilian and military leaders; in anticipation of the gathering storm, the Army had expanded from its low of only 210,000 men at the outbreak of hostilities in Europe. Still, the United States was in no position to carry the war to the Axis powers. It needed to create many new combat divisions. This is the story of one such division—the 10th Mountain Division—which was specially created for fighting in mountainous terrain.

The 10th Mountain Division was unusual during a time when units trained as rapidly as possible and then deployed into an expanding war. It was built and trained slowly over a period of two years before it was committed to combat. In the difficult terrain of mountainous Italy, there was a definite need for a unit trained for mountaineering. Unfortunately, this division was held back from the time of the September 9, 1943 invasion of mainland Italy until January 1945, just in time for the final offensive.

The germination of the idea for a special unit trained in mountain warfare began in February 1939 with C. Minot (Minnie) Dole of the National Ski Pa-

trol and Roger Langley of the National Ski Association, both of whom were ski enthusiasts. A discussion of the Russo-Finnish War, then in progress, resulted in a comparison of the merits of the two armies. Both Dole and Langley applauded the tactics of the Finnish troops who were adept skiers:

Dressed in white uniforms to match the backdrop of snow, the Finns glided quietly on long, narrow skis through forests to attack the Russians moving along plowed roads. Then after surprising and ambushing the Russians at a point of the Finnish army's choosing, they returned to the forest, secure in the knowledge that no mechanized vehicle nor man on foot could follow them.

The two men then concluded that American troops were more similar to those slow-moving troops of Russia than to the fast-moving, efficient Finns, and set out to correct the deficiency.

Support for this new type of combat unit was not immediate. Over the next 14 months, Dole and Langley met with representatives of the U.S. Army to press for the creation of a combat division of skiers and mountaineers. Dole took the lead in the project and phoned government officials he had known when he was a student at Yale. Finally, in April 1941, Army Chief of Staff General George C. Marshall approved

the project and ordered the training of a division of troops who would be adept skiers and climbers.

At the conclusion of the building of the new division, it consisted of some 300 experienced skiers and veteran mountaineers, 6,000 younger skiers, 3,000 draftees (who had to be taught to ski), and 3,000 non-skiing support personnel—such as administrators, medics, mule skinnors, horse wranglers, and artillery specialists.

Because of indecision within the Army, the location for the new training post changed from Yellowstone National Park, the site originally suggested, to Fort Lewis, Washington. Eventually, a new facility was constructed at Camp Hale, high in the Colorado Rocky Mountains near the town of Pando, 20 miles from Leadville, Colorado. Meantime, new mountain troopers were trained at Fort Lewis.

The composition of the new unit included many expert skiers and climbers. The first soldier to report to the 87th Mountain Infantry Regiment (the division's first regiment) was a ski racer, Charles D. McLane, of the Dartmouth Outing Club. After the unit had moved to Camp Hale, the other two regiments, the 85th and 86th Mountain Infantry Regiments, joined the 87th.

The Army used a unique recruiting tool to improve the quality of personnel at Camp Hale. The National Ski Patrol recruited 3,000 skiing men by the summer of 1943, many of them international champion skiers and climbers, among them men from Switzerland, Austria, Germany, and Norway. One battalion, the 99th, was composed entirely of soldiers of Norwegian ancestry. There were also refugees from almost every country in Europe.

Upon arrival at Camp Hale, the new mountain soldiers found very Spartan conditions. The camp was in a narrow, steep-walled basin, high in the mountains at an altitude of 9,500 feet. In winter, the average depth of the snow was about 12 feet, and the temperature sometimes fell to 30 degrees below zero. The altitude and basin-like location caused dizziness, and the coal-burning stoves created a great deal of pollution that caused a cough, called the "Pando hack," which soldiers could escape only by climbing one of the nearby mountain peaks. (The poor conditions at Camp Hale were so well known that Walter Winchell, at the time America's best-known radio newsman, told his listeners, "Mothers and fathers of American soldiers, if you have a son in the Solomons or Camp Hale, don't worry about your son in the Solomons.") Recreation was also difficult for the ski troops to find, even in nearby Leadville. At the early stages of the division's training, Leadville was considered too wild for the soldiers, and the Army declared the town off-limits.

The barracks that housed the ski troopers were wooden structures, heated with coal. The beds had no sheets—only two blankets and a comforter. One room was set aside for drying ski equipment and clothing.

Most of the members of the 87th had received one year of skiing experience at Fort Lewis. Most members of the other units not only lacked significant skiing experience, but had never been on skis. A training program began immediately but was ineffective because the relatively junior instructors were unable to get their superiors to attend training. This weakness in training became apparent in February 1943 when

the unit participated in a training exercise that resulted in utter chaos. The division then made changes that ensured all soldiers and officers would receive the required training. High rank no longer provided an exemption. In March and April 1944, the 10th Mountain Division conducted a similar exercise. Although much improved from the previous winter, many of the problems were still apparent.

The division conducted more traditional training in the use of gas masks and weapons in addition to training in skiing and rock-climbing. In the beginning, birch logs were used in place of rifles, which were in short supply. When the men were ordered to "fall out," they made a mad rush to get the lightest logs.

Most members of the 87th had received one year of skiing experience at Fort Lewis.

Most members of the other units had never been on skis.

Even in the cold climate, physical conditioning was not neglected: Calisthenics were conducted on the rocky drill field early every morning. Usually, the temperature hovered around freezing.

Training for the new mountain troops included carrying approximately 100 pounds of equipment that the division believed necessary to survive and fight in the mountains, and at an altitude where U.S. Army Air Corps pilots turned on their oxygen. Army manuals for high-altitude training set a maximum load of 45 pounds per soldier.

The use of 5,000 mules as pack animals was a central feature of the division. The mules were eugenically bred at Fort Reno, Oklahoma, for transporting artillery and supplies in mountainous terrain. Typically, a mule carried a 100-pound pack on top of a 100-pound saddle. Learning to handle the usually stubborn animals required a lot of training, as well as a lot of mule-inflicted pain.

Another challenge facing the new division was the selection of gear and clothing that could sustain the soldiers

in combat in the cold, mountainous environment. Many experts participated in a series of conferences on military equipment. (Such civilian companies as Montgomery Ward and L.L. Bean supplied a lot of the equipment.) It had to be durable, rugged, lightweight, standardized, and made of materials that were not in short supply in the United States. Existing weaponry provided the artillery and firearms, although with some adaptations.

The uniform the division eventually adopted included a reversible windbreaker, olive drab on one side and white on the other. Other items included the knitted wool cap, poplin ski cap, wool sweater with button-up neck, wool ski pants for very cold conditions, and poplin pants for warmer weather. The trigger-finger mitten provided warmth with the flexibility needed to fire weapons. Many of these items are still used by the Army today.

The need for skiing equipment provided numerous problems for the soldiers of the division. Ski goggles were the most problematic, and the division tested numerous designs. The Army ultimately adopted several of these but none were totally satisfactory. Skis also saw considerable testing and evolution during the war years. Those that were eventually adopted were difficult for the novice to control. "Climbers"—mohair and canvas strips—were attached to the undersides of the skis to allow the skier to slide forward while preventing him from sliding backward. The same principle is still used today in the "fish-scale" design of cross-country skis.

Soldiers of the division needed a universal boot that could be used in skiing as well as marching and climbing. The continual search for the ideal ski boot caused its alteration more than any other piece of mountaineering equipment during the war.

Camping equipment, for life in a cold environment, included a medium-weight poplin tent which, like the windbreaker, was white on one side and olive drab on the other. But this tent was so effective in keeping out moisture that it also trapped moisture inside. Thus, the tent was never popular among soldiers; they disliked the moisture prob-

lem and the effort involved in erecting and taking down the tent. During the February 1943 maneuvers, many mountaineers arranged their tents in neat military rows but chose to sleep in snow caves or snow-block igloos.

The sleeping bag the Army eventually produced was mummy-shaped. Since goose down was in short supply, manufacturers substituted chopped chicken feathers, which made the bag slightly heavier. The bag was very popular, however, and continued to be used after the war by a generation of campers, hikers, and climbers. Other products included the development of nylon rope to replace Philippine hemp rope. Soldiers were issued climbing ropes, ice axes, pitons, piton hammers, and rucksacks. The mode of transportation for use in the snow was the "weasel," a forerunner of today's snowmobile. The Army developed the specialized C-ration, high in fat content, for feeding the soldiers in the field. These were supplemented with fruit bars.

In June 1943 the Army designated the regiments at Camp Hale the 10th Light Infantry Division, and Major General Lloyd Jones assumed command. He proved unpopular with the soldiers of the division. On one occasion during a snowstorm, he directed a number of soldiers to police 50 square miles on the sides of the Rocky Mountains for any trash or debris that soldiers on maneuvers may have left. On another occasion, when asked how the maneuvers of March and April 1944 had gone, he minimized the number of cold weather casualties and other injuries and expressed obvious contempt for those who failed to complete every part of the arduous exercise.

On 22 June 1944 the 10th Light Division moved to Camp Swift, Texas, where it was redesignated the 10th Mountain Division on 6 November 1944. On 23 November Major General George P. Hays, who had commanded the 2d Division Artillery on the western front in France in World War I, replaced General Jones as division commander. He was a very capable commander whom Lieutenant General Lucius K. Truscott, Jr., his 5th Army Commander, described as "one of the

ablest battle leaders I ever knew" and said he "fitted the division like a well-worn and well-loved glove."

After all other Allied Theater commanders had rejected the division because of its small size and other unique features, the Army assigned the 10th Mountain Division to Fifth Army in Italy. Although the Army was prepared to send it to other theaters of operation, this fortuitous development put the 10th Division in the right environment to make use of its mountaineering skills.

On 11 December 1944 the 86th Infantry Regiment left the United States bound for the port of Naples, Italy, arriving there on the 23d. Briefly stopping at a staging area in Bagnoli, Italy, just north of Naples, the regiment then proceeded on 26 December to the front in northern Italy. The first of the combat regiments of the 10th Division fi-

The first of the combat regiments of the 10th Division finally arrived at its sector of the Italian front on 9 January 1945.

nally arrived at its sector of the Italian front on 9 January 1945. On 28 January the last elements of the division completed the move from the United States to the Italian front.

The 10th Mountain Division's long and thorough training was well known, and it was held in high esteem. Its 87th Infantry Regiment had participated in the unopposed landings on Kiska in the Aleutian Islands. The 30-mile front it occupied in Italy ran from Mt. Belvedere to the Serchio Valley and passed through some of the highest and most rugged terrain of the northern Apennines. Because this terrain was not practicable for a large-scale assault, it was lightly held by both sides. But it was also here that the division's specialized training could provide the greatest benefit.

In the first of three major offensives, the 10th Mountain Division proved its worth and provided a glimpse of what it would do in the future. The key to the stalemate in Italy was Highway 64, one of two main roads through the Apenni-

nes leading toward Bologna. The Fifth Army plan required the scaling of a 1,500-foot cliff at the Sarasiccia-Campania ridge. During the night of 18-19 February, the division scaled the cliff and took the German defenders by surprise. Soldiers of the division then repelled German counterattacks. The division focused its main effort on the Belvedere-Gorgolesco hill mass with the 85th and 87th Regiments. To gain surprise in this attack, the division avoided the normal use of preparatory artillery fire. This plan worked, and the division gained the crests of Mount Belvedere and Mount Gorgolesco on 20 February. The division then advanced against the crest of Mount Torracchia in the face of strong German opposition and reached the summit on the 24th.

The second phase of the Allied plan began on 3 March. Following an artillery barrage and tactical air support, the division cleared the enemy from the ridges to a point south of Vergato, seized Castel d'Aiano. Then it beat off the repeated counterattacks of the 29th Panzer Division, which the German Command had rushed in to support its crumbling front. General Truscott then stopped the progress of the attack; it would be another month before the spring offensive, and he wanted to avoid forcing the Germans to commit more reserves into the area. The 10th Division had provided an impressive performance in the two stages of this first battle. It had inflicted heavy losses on the Germans and had taken more than 1,200 prisoners. It had also set an example for the Brazilian Expeditionary Force, its neighboring unit in the attack, which had previously failed to make progress. The success of the division, a result of its mountain climbing skill, had been so overwhelming that it had to be ordered to stop, lest it spoil other plans all along the front.

The final offensive in Italy, one in which the 10th Division was heavily involved, began 14 April 1945. In general, the plan the Allies had established called for the 5th Army to enter the Po Valley and capture Bologna. The British Eighth Army would cross the Santerno River. Both armies would then

break through German defenses and surround the Germans south of the Po River. Finally, both armies would cross the Po, advance to the north, capturing Verona, and then move to the Brenner Pass in the Alps. In this operation, the division cleared the Pra Del Bianco basin and secured Torre Iussi and Rocca di Roffeno. Spearheading the Allied drive, the division then took various mountains and emerged into the Po valley on 20 April.

In this action, the skill and valor of the 10th Division were demonstrated by a soldier assigned to the 85th Infantry Regiment, who earned the only Medal of Honor awarded to the division. On 14 April 1945, Private First Class John D. Magrath made the supreme sacrifice near Castel d'Aiano, Italy. (Another casualty that day was future Kansas Senator and presidential candidate Second Lieutenant Robert Dole. Never a volunteer for the ski troops, he had come to Italy in December 1944 as a replacement and joined the 85th Regiment in February 1945. On April 14, during heavy combat, Lieutenant Dole courageously dragged his wounded runner to cover before being hit. He suffered the loss of one kidney as well as the use of his right shoulder and arm.)

By now, the German Army in Italy was collapsing in a state of confusion and disorder when the 10th Division penetrated its lines. German prisoners surrendered by the thousands. Those German units that still had some semblance of order were trying to escape across the Po River. Three American divisions, including the 10th, crossed the Po on 26 April in pursuit of those Germans who had escaped (most by swimming), as well as to complete the total conquest of Italy. Their goal was the Brenner Pass, which led to Austria.

The 10th Division continued along the eastern shore of Lake Garda. The headquarters of Italian leader Benito Mussolini had been located on the western shore, and the division was to conduct an amphibious operation to capture him and other Fascist officials. Meanwhile, Mussolini had escaped toward Switzerland. Partisans captured him en route and shot him and his mis-

stress before Allied officials could rescue them.

On 2 May the German forces in Italy surrendered to the Allies. German General von Senger requested that he be escorted to the surrender ceremony on May 3 by General Hays, his principal opponent in the final days of the war. The 10th Mountain Division had spearheaded the attack that brought about the final defeat of the German Armies in Italy.

Although the division continued to participate in Allied actions, such as advancing to the Austrian border and securing Trieste, near the Yugoslav border, all significant combat had ended on 2 May. The Army planned to convert the 10th Mountain Division to a regular infantry division and send it to the Pacific Theater for the invasion of Japan. In August 1945, while the division was in the United States, that plan

In spite of its outstanding wartime record, the division's creation and development is a classic study in how not to create a new military unit.

was cancelled when Japan surrendered. The division deactivated on 30 November 1945 at Camp Carson, Colorado, near the spot where it was formed.

In battle, the 10th Mountain Division was one of the U.S. Army's finest. Its combat achievements were virtually unequalled.

It trained for a comparatively long time—spending a lot of time, effort, and misery—to acquire skills that were never used. For example, a great deal of time was devoted to skiing. Training in skiing is a time-consuming enterprise that is very wasteful if the skill is not used. Although the soldiers of the division were often referred to as “ski troops,” only three platoons ever skied in battle. Much more useful were its mountain climbing abilities, which surprised the Germans and broke the stalemate.

When the division went to Italy, it did not deploy as an elite unit, but as regular infantry. The casualties suffered

were also heavy, with 4,154 wounded and 992 killed.

The unit was not used to its fullest capability, and it was not developed according to reasonable expectations of probable needs. The altitude was too high for military needs and resulted in countless and needless training casualties. During World War II, no targets existed much above 5,000 feet in any theater. Accordingly, soldiers should have been trained at lower altitudes, where combat action was more probable. The heavy loads the soldier carried is another example of the focus on unrealistic training that resulted in needless hardships and training casualties.

Fortunately, the Army has learned from its mistakes with the 10th Mountain Division. Current doctrine requires that a unit be used in accordance with its abilities. It follows that training must mirror the expected need for combat skills. With a process called backward planning, once the probable needs are identified, a plan is developed to provide the training for those skills as well as unit assets. The end result is a unit tailored for the specific combat situation.

Military units are expensive to create and fully train. To develop skills and not use them is wasteful. The example of the 10th Mountain Division shows what happens when planning is not directed at developing a combat unit that is better suited to the expected battle situation. The division performed extremely well, nevertheless, breaking the stalemate that had developed in the mountains of northern Italy. But its introduction into combat in the early days of the Italian Campaign might well have led to an earlier end for the war. And in that slow-moving campaign, it most certainly would have resulted in fewer casualties.

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Establishing and Using The Brigade Reconnaissance Troop

CAPTAIN ROSS F. LIGHTSEY

The brigade reconnaissance troop (BRT) was formed out of the demand for more intelligence information on the modern battlefield. In this specific case, it was a direct result of the 1st Infantry Division restructuring. This concept, termed Limited Conversion Division XXI (LCD XXI), gives the brigade commanders more observers on the battlefield as well as more operational flexibility. Six months after its activation, the division's 2d Brigade's BRT was (and still is) an extremely useful tool in support of the Kosovo peacekeeping mission.

The primary mission of the BRT is to provide battlefield information directly to the brigade commander, who, along with his staff, determines the role of the troop in all brigade missions. Though not preferred, when augmented, the troop may also conduct limited offensive, defensive, and retrograde operations in an economy of force role. For combat oriented missions, the BRT has five essential tasks: route reconnaissance, area reconnaissance, zone reconnaissance, screen-line operations, and area security.

The fundamental role of the BRT is to perform reconnaissance and surveillance and provide limited security for the brigade combat team (BCT) in close and deep operations. The BRT facilitates the BCT commander's ability to maneuver, concentrate combat power, and apply it at a decisive time and place.

The 1st Infantry Division converted to the new concept of LCD XXI in December 1998. This meant that the infantry and armor battalions lost one company each, relinquishing either 14 Bradley fighting vehicles or 14 Abrams

tanks, as well as company support vehicles. This left three maneuver companies and a headquarters and headquarters company (HHC) in each battalion. Although both Infantry and Armor battalion commanders feel that they have lost firepower as well as manpower, combat effectiveness only shifted in the division and the brigades to other assets. At the brigade level, the BRT was formed, and the division gained a multi-launch rocket system (MLRS) battalion and eventually fielded unmanned aerial vehicle (UAV) assets.

The first division to test this new BRT concept was the 4th Infantry Division at Fort Hood. The 4th Division took two reconnaissance platoons from the separate battalions and merged them with a command and a headquarters element to form the new BRT. The transition was relatively smooth. With the addition of artillery attachments and other support elements, the 4th ID BRT was an 82-man unit.

Pulling entire reconnaissance platoons out of battalions was entirely out of the question with the 1st Division. It

would have left the battalions without reconnaissance platoons and with little or no intelligence gathering capability. But if each of the battalion reconnaissance platoons relinquished four high-mobility multi-purpose wheeled vehicles (HMMWVs) with their crews, the newly formed BRT would have 12 reconnaissance vehicles—exactly the number needed to form two reconnaissance platoons for the BRT (Figure 1). At a scout platoon leader course briefing in January 1999, the Armor School intended for this to happen. There were supposed to be six HMMWVs per recon platoon at battalion level instead of the current 10-HMMWV recon platoon.

The Armor School's intent has an apparent advantage and an obvious disadvantage. The advantage is the quick and fluid formation of a BRT. The obvious disadvantage is the limited reconnaissance at battalion level. In our BRT's case, the battalions kept their reconnaissance HMMWVs but transferred some soldiers. The brigade's three reconnaissance platoons and the division's cavalry squadron contributed

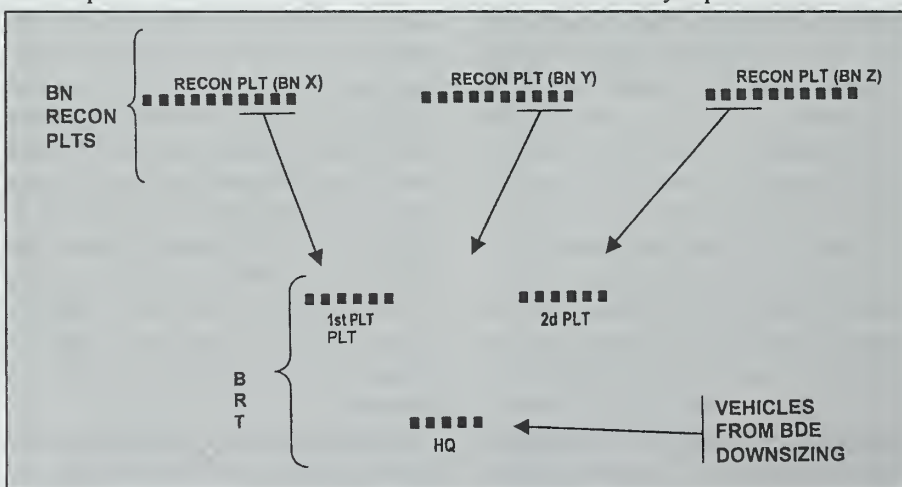


Figure 1

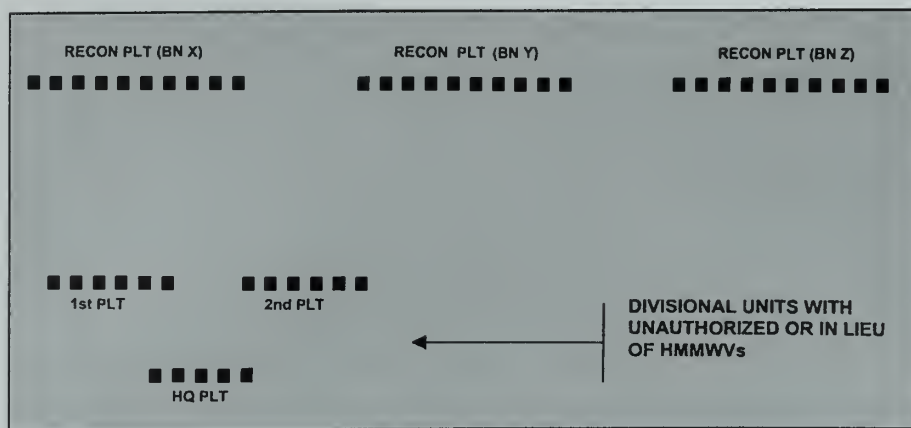


Figure 2

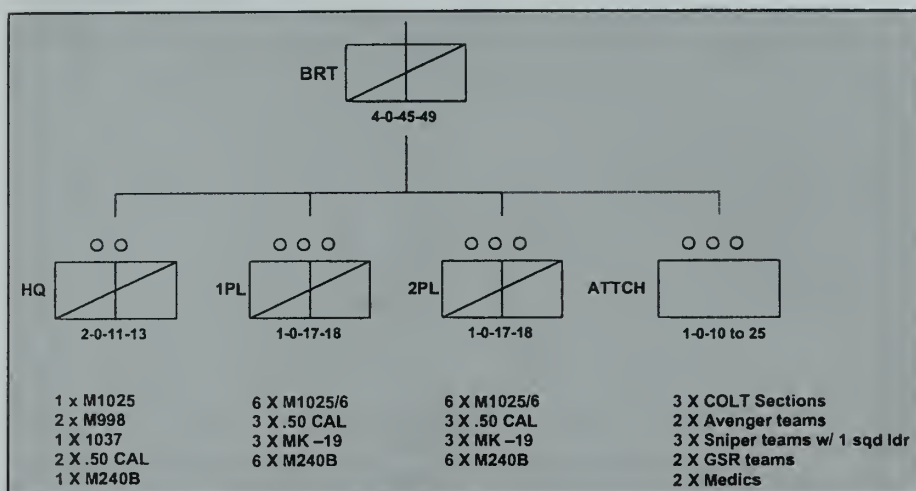


Figure 3

selected soldiers. The HMMWVs came from the divisional units that had the hard shell M1025s and M1026s (Figure 2). The BRT headquarters platoon vehicles were derived from excesses following the brigade's loss of three companies.

In obtaining M1025 and M1026s from other division units, certain requirements should be carefully considered and analyzed. The property book office recognizes that the HMMWV should be handed over with full accessories—radio-installation kits, wiring harnesses, antenna mounts, radio mounts, amp mounts, weapons and ammunition mounts, bearing sleeves, etc. But when laterally transferring a HMMWV, one must specify what does, or does not, come with it. If the division does not request or specify, a losing unit will relinquish a stripped HMMWV to the gaining unit. The losing unit is under no obligation to sign over additionally needed equipment and items. All sub-components should be

transferred at the same time, so as not to piece together an incomplete truck. In our case, receiving HMMWVs without laterally transferred sub-components greatly reduced the newly formed BRT platoons' ability to train, shoot, and communicate.

MTOE Strength

Under the current MTOE (modified tables of organization and equipment), the BRT is authorized four officers and 45 enlisted men, for a total of 49. This does not include attachments or other supporting slice elements. The BRT has two maneuver platoons and a headquarters platoon. Each reconnaissance platoon consists of 18 soldiers and six HMMWVs. In the recon platoon there are three M2 .50-caliber machineguns and three Mk-19s, and each soldier carries an M16 or an M203. The platoons are assigned six M240Bs each, which can replace the truck-mounted Mk-19 or can provide crew-served firepower for a dismounted observation post (OP). The

headquarters platoon consists of 13 soldiers with an M1025, two M998s, M1037 w/S-250 shelter (command post, CP, vehicle), and an M923.

Within the division and the brigade, other reconnaissance assets can be attached. This BRT habitually trains with combat observation laser teams (COLTs), infantry snipers, air defense artillery (ADA) sections (Avenger), and ground surveillance radar (GSR) teams. Although medics have been recognized as a necessity, they are not on the MTOE (Figure 3).

The task organization of recon platoons can vary greatly. When given attachments to accomplish certain mission requirements, the platoon leader has considerable flexibility. If the platoon is fully manned, he can divide it into three different sections. Typically, mounted maneuver will be in two different sections. If he receives the attachments at full strength, he can configure the platoon into four different sections. The only drawback to the current manning strength lies in its restrictions on dismounted maneuver. It takes three soldiers to properly man each HMMWV, but the MTOE does not allow for additional dismounted reconnaissance. In order to have dismounted scouts, we must consolidate two or three HMMWVs and their crews upon reaching an insertion point. This type of consolidation is termed "garage siting," which is effective but wastes firepower on crewless HMMWVs. Although the addition of snipers would solve many problems, it may involve some issues regarding intent and usage. It would give the snipers a means of inserting deep, give the BRT dismounted scout capability, and give the snipers a means of exfiltration for refitting or medevac purposes. Snipers are trained in surveillance and are excellent observers and shooters, but the latter aspect is almost completely discarded, leaving them with only an observing mission. Snipers have trained with our BRT and proved to be a tremendous asset, but their attachment has not been guaranteed for training deployments or real world missions.

Task organization also is chosen on the basis of the available equipment.

For the most part, the current MTOE has the BRT operating with satisfactory equipment. In order to maintain and excel with Force XXI standards, I propose changes to the MTOE authorizations as shown in the accompanying box.

Systems such as the tactical satellite (TACSAT) radio system are needed because of the extreme distances covered on the brigade front. Communication is the platoon leader's most lethal weapon in the reconnaissance fight. Other essential equipment includes M68, Ranger body armor, PAQ-4C, PAS-13 for the BRT's various contingency missions. Gunners on the HMMWVs should also have M9 Berettas for close-range enemy engagements. The M997 CP vehicles have proved far superior to the M1037s (with S-250 shelters) in space and adaptability, and they are more readily available.

Maneuver and Intelligence

As stated earlier, the BRT's role is to provide information to the BCT commander on today's three-dimensional battlefield. On a linear battlefield, we had more depth and lethality with indirect and direct fire. Having additional deep reconnaissance assets created more depth as well as more effective indirect fire. The BRT also closes the intelligence gap between division or corps long range surveillance detachments/units (LRSD/U) and battalion reconnaissance. Most mechanized divisions do not have LRSDs; therefore (before the BRT) the battle hand-over distance between corps LRSUs and battalion scouts was immense (Figure 4). On the other hand, with limited availability, units may find themselves working within a more restricted area. Whether the addition of the BRT increases depth or just puts more assets within the same depth, the BCT commander now has additional "eyes on" confirmation than he normally would not have. In the past he may have been tempted to pull from the battalions' platoons to recon his own named areas of interest (NAIs), leaving the battalions themselves with less intelligence capability.

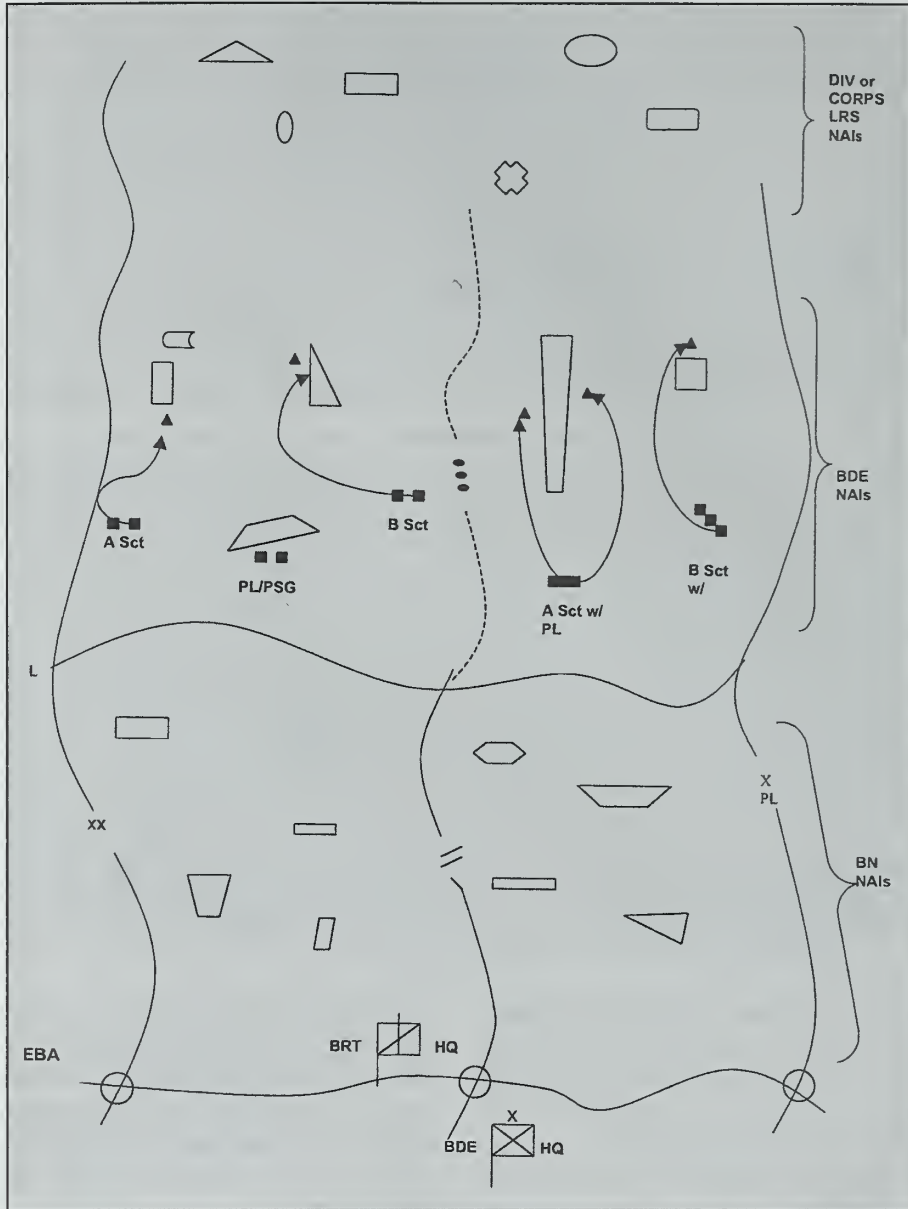


Figure 4

Having separate control measures for the BRT platoons in a BCT attack is simple. If the BCT attacks (or defends) with two battalions abreast, the border separating the two is extended to give each of the BRT platoons an area of responsibility. The control measure between the BRT and battalion reconnaissance could be termed an information hand-over line (IHL), which is much like the battle hand-over line during a relief in place. This makes for a good transfer of information.

Information transfer is critical in the intelligence process and in the indirect firefight. BRT platoon leaders are trained to disseminate key information on an advancing enemy. In addition to

reporting enemy activity to the troop CP, the platoon leader also reports it to the gaining unit. More than likely, the gaining unit will be a battalion reconnaissance platoon. Before any operation that ties in frontal activity, platoon leaders must coordinate face-to-face. Left and right coordination with adjacent units can be difficult as well, but front and rear coordination is imperative to the lives of men. Preventing fratricide will be a direct result of situational awareness between all the reconnaissance units arrayed on the battlefield.

The platoons can use various techniques for mounted and dismounted operations (Figure 4). One technique that has proved extremely successful is

EQUIPMENT	CURRENT	PROPOSED	CHANGE
	MTOE	MTOE	
AN/PSC-5 TACSAT	0	3	+ 3
AN/PRC-139	0	13	+13
SINCGARS RT	33	45	+12
UAS-11 (thermal sight)	8	2	- 6
AN/PAS-13 (thermal sight)	0	13	+13
M16A2	48	0	-48
M4 carbine	0	48	+48
M9	1	15	+14
M68 (reflex sight)	0	48	+48
PVS-14 (monocular sight)	0	24	+24
LRAS3	0	2	+ 2
M1037 (w/5-250 shelter)	1	0	- 1
M997 (converted ambulance)	0	1	+ 1
PAQ-4C (IR laser pointer)	0	48	+48
MK-64 (single weapon mount?)	6	0	- 6
MK-93 (dual weapon mount?)	0	13	+13
Ranger body armor	0	72	+72
AN/PSN-11(PLGR)	15	0	-15
PLGR-2	0	15	+15
5K generator	1	0	- 1
15K generator w/ trailer	0	1	+ 1

air insertion, which allows great freedom of stealthy movement, along with the reduced likelihood of compromise. With the distance of up to 40 kilometers, however, FM communications with the SINCGARS (single-channel ground and airborne radio system) can be extremely difficult. An air inserted team must take an OE-254 feed-cone with the antennas and cable. Once communications are established, a dismounted team is immensely combat effective and allows the BCT commander to use most of his combat multipliers on long range targets.

The placement of the BRT's CP is key to the fact that it must tie in communication with the platoons and also stay as far from the enemy as possible. Because logistical package (LOGPAC) operations are difficult during high-intensity combat, each platoon must handle at least three days of Class I and III supplies. Class V (ammunition) will have to be assessed on the basis of the threat and the number of engagements an OP expects to be involved in. Obviously, a direct fire engagement is the least desired in reconnaissance operations. If there is a logistical need among the platoons, the preferred technique is for the platoon sergeants to drop off an OP and go to the BRT CP site.

Further force multipliers are the additional use of attachments. COLTs, for

example, must be placed on the critical targeted areas of interest (TAIs) that make the best use of their laser designating capabilities. Open TAIs with roadways and intersections are best given to a reconnaissance section with a COLT. With the GSR line-of-sight system, they are also best suited to overwatch mounted and dismounted avenues of approach. With NAIs that are more wooded and less open, attached snipers are best trained for stealthy individual movement to a specified area or a point target. With a combination of all these assets, the platoon leader must deeply analyze METT-T (mission, enemy, terrain, troops, and time) to assign the proper missions to the most capable attachment.

Although this discussion has focused on using the BRT in a typical linear battlefield, some contingencies may involve the BRT in non-linear maneuver. Examples such as Vietnam and Somalia have shown that the enemy is not always to the front, which will dramatically alter the BRT's task and purpose. For instance, a BCT's objective may be a town that is populated with friendly and unfriendly civilians, a paramilitary force, terrorists, and local revolutionary factions. A BRT task might be to seal off outside avenues of approach with layers of security or even to provide early warning of desired en-

emy movement toward an established engagement area (Figure 5).

Stability and Support Operations

For stability and support operations, the mission and focus will drastically change with the environment and various tasks. In addition to the five essential tasks of the BRT in combat, tasks for such operations are route clearing, border operations, checkpoint operations, cordon, search and seizure, convoy escort, village assessment, quick-reaction force, and presence patrols. The main advantage of the BRT is the mobility and quickness it offers, as it did during Task Force Falcon in Kosovo. When a specific task force maneuver company is assigned a particular sector, it is very difficult for its units to react quickly without the use of HMMWVs or air assets. Having mechanized infantry and armor is an excellent way to show force, but the rapid flexibility of the BRT is preferred.

If the BRT is allotted COLTs (which it has in Kosovo), these teams may be used in a noncombative manner. The BRT commander can actually use them as a third fully operational maneuver platoon, thus giving him three maneuver platoons with up to six HMMWVs each. Another option is to integrate the three platoons by having the reconnaissance platoons relinquish a section each and the COLT platoon relinquish two sections to the recon platoons. This fosters a habitual relationship between the scout and COLT. Further integration of GSRs and Avenger teams is also encouraged and is most effective for surveillance in night operations. The ADA Avenger teams have excellent sights, which were originally designed for watching the skies but are also very effective for observation of ground activity at great distances.

Lessons Learned

Acquisition of troop personnel. Before the BRT flagged and was established, the commander was given a certain number of soldiers from each of the battalions. Some of the soldiers did not have retainability or had physical limitations, which created issues of combat effectiveness and bidding for

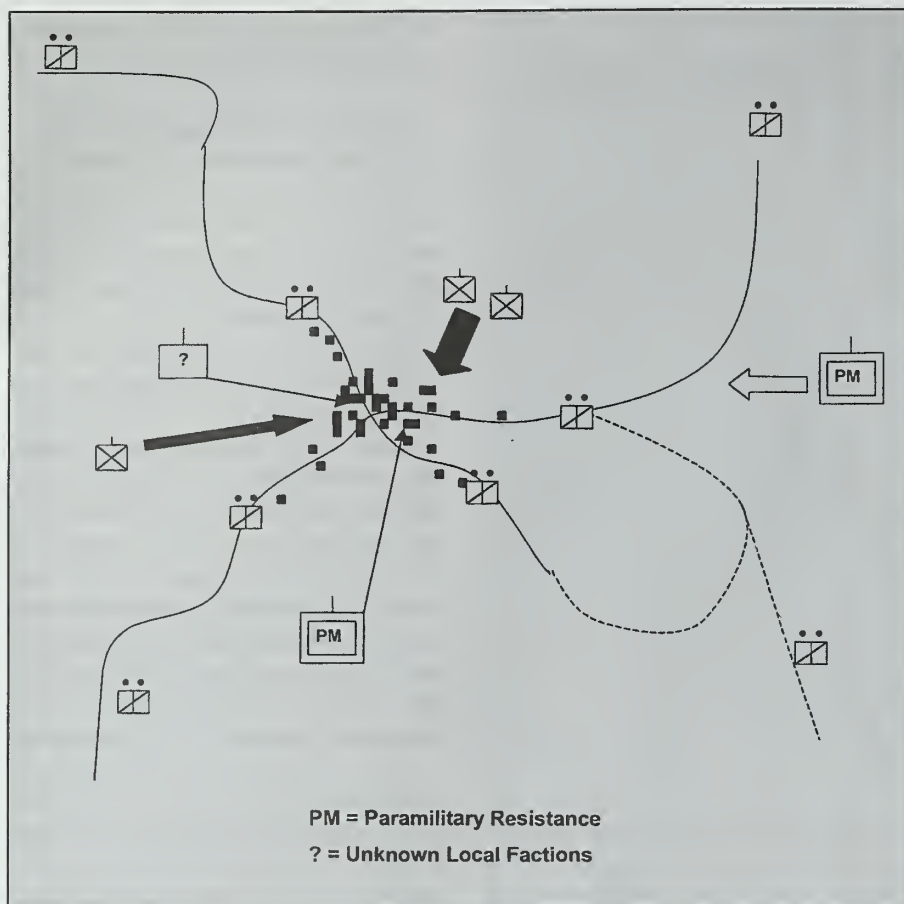


Figure 5

replacements. When establishing the BRT, the commander should have free rein in selecting 19D soldiers from the battalions. He should be able to actively recruit soldiers for the BRT.

Deployability. Six months after the BRT was formed, it was deployed to Kosovo; it was the division's first unit in Kosovo and did well. But deploying the BRT two or three months after standing up may not have been a wise decision because of the untrained status of the unit as a whole. This would have placed the unit in an awkward position.

For the first three months, the sole focus should be property and supply issues. The next three months should include two gunneries and at least one high-intensity rotation at a major training center. The unit should remain nondeployable until certified by a division or a brigade evaluation exercise.

Lateral transfer of property. Quality control on the gaining and losing units was not as thorough as desired. Establishing the BRT with functional equipment was the short-term goal. The

process was expedited to have the unit operational within a short time. Turning down incomplete equipment and property was not allowed. Major end items were short of various Class II and IX parts and equipment, or even defective equipment was laterally transferred to the BRT.

A field grade officer working for the brigade could serve as the quality control officer. The BRT should have a three-month window in which to accept or deny property, and to hold the losing units accountable as well.

Support. Most company-size maneuver units have their battalions to support them on various necessities such as ammunition, maintenance and prescribed load list, medical, etc. It was a slow process at first to incorporate all support assets that work for the brigade. The support improved dramatically after the outside supporting units officially recognized the BRT. The brigade's headquarters company shouldered more than its share of the task to ensure support for the BRT. Attaching

the BRT to a maneuver battalion created some ownership issues as well as unit administration and chain-of-command concerns.

Before the establishment of the BRT, combat service support elements should rehearse with the BRT and supporting units. The brigade will assist in all outside supporting requirements.

Brigade or regiment reconnaissance is not a new concept by any means. Reconnaissance assets at the brigade level have always been a necessity to maximize the depth of today's combat multipliers. With the formation of the BRT, one must consider the level of training the soldiers will require, as well as the advent of new equipment needed to fight on the modern battlefield. Gone is the time of acceptable massive losses in battle, especially among the scout community. The lack of training or the lack of modernized equipment will definitely put our deep brigade recon troopers at higher risk than anticipated. The formation and activation of the BRT is a painful but necessary process. Saving the training budget by eliminating three combat companies in the brigade is more than enough to justify spending extra resources on properly equipping the BRT.

Nevertheless, the BRT has proved itself in its first real world deployment, Operation Joint Guardian in Kosovo. Task Force Falcon (Multi-National Brigade, East) relied heavily upon the BRT to accomplish Task Force tasks that were set upon the BRT daily. It enabled the 7,000-troop Task Force to have a quick proactive and reactive unit that was controlled by the centralized command.

When the remaining divisions and brigades convert to the LCD XXI, they will definitely gain a tremendous asset to help accomplish the difficult missions of the future.

Captain Ross F. Lightsey was a scout leader in the 2d Brigade's BRT (Troop E, 4th Cavalry), 1st Infantry Division, in Kosovo, and previously served as an infantry platoon leader in Bosnia and a company executive officer with the 1st Battalion, 26th Infantry, 1st Division. He is a 1995 ROTC graduate of Southwest Texas State University and is now assigned to the JFK Special Warfare School at Fort Bragg.

The Antitank Section

In Support of a Light Infantry Rifle Platoon

CAPTAIN CHARLES L. HITER

During Operation *Desert Storm* in 1991, U.S. military forces engaged enemy armor in the greatest strength since World War II. Although Iraq's Republican Guard and the Iraqi Army did not pose a large threat once the ground war began, the possibility was there for light infantry—including airborne and air assault soldiers—to face the brunt of an armor attack.

If the Iraqi Army had gone on the offensive against the 82d Airborne Division, the division's only antitank capability would have been the 3d Battalion, 73d Armor, the antitank companies of the battalions, and the Dragon gunners in the line companies. The division lost its largest antitank asset when the 3d Battalion, 73d Armor, was subsequently deactivated in June 1997. Around this time, the 82d began fielding Javelin antitank missiles to replace the Dragons in the line companies.

All of these changes show the need for better light infantry training in antiarmor ambushes, attacks, and defenses. The one thing that has not changed since then has been the support of the 11H military occupational specialty in the antitank companies, one per battalion. Foreseeing the need to have these platoons pushed down to line companies, to aid in their attacks on armor or reinforced objectives or defense from an armor threat, also supports the argument for better antiarmor training in the rifle companies. A light infantry rifle platoon leader gains several capabilities when he is given an antitank section.

An AT platoon consists of four HMMWV M996 gun vehicles and two cargo jeeps (HMMWV M998s). The cargo vehicles are for the platoon leader and the platoon sergeant and together

make up the command and control element. The two sections of the platoon consist of two vehicles each with one Mk 19, one M2, and two TOWs with thermal sights. The M996s carry six rounds each for the TOW and can mount or dismount any of their weapons. The section leader is normally a staff sergeant, with one sergeant as a squad leader. Three people make up the vehicle crew: the gunner, the driver, and the squad or section leader.

During my officer basic course I received very little instruction on the employment of the antitank weapons I would encounter when I got to my platoon. What I did receive discussed the use of the TOW as an antiarmor weapon but did not go into the employment of the vehicles when moving with dis-

A light infantry rifle platoon leader gains several capabilities when he is given an antitank section.

mounted soldiers or the use of the M2 or the Mk 19. If you are a light infantry platoon leader, there are several key things you must remember when using an AT section in support of the platoon:

First, a good terrain analysis is vital, because vehicles obviously cannot go everywhere light infantry goes. Plan routes that allow ease of movement for the vehicles, or be ready to halt so the vehicles can bypass any obstacles they encounter.

The AT section must not be used as an advance guard for your platoon; keep them behind you or close to where you are moving. When moving with vehi-

cles, remember that you need to keep them close enough to support you but not so close that the noise gives away your position. Small arms fire can penetrate the light-skinned HMMWVs, and if a vehicle is destroyed because it is out in front, you lose both mobility and a large amount of firepower.

Finally, do not lose command and control of the vehicles. In cases where the vehicles have to bypass an obstacle and then link up with you, plan for this and designate someone to serve as the link-up person. I used my weapons squad leader at the rear of my formation to guide them back to the platoon. He maintained control of them through his AN-PRC-126 on the platoon net. This also enabled him to bring the vehicles up to his support-by-fire position.

During the search-and-attack mission, keep a tight rein on the AT section. Although HMMWVs can drive cross-country in most types of terrain, there are creeks and thickly wooded areas that they must bypass. During planning and route selection, include the section leader in your planning and wargaming group. He will be able to give you an honest opinion as to his ability to drive along your planned route. Do not tailor the route to the vehicles, but make sure they are controlled and responsive when they are separated from the platoon. During movement, keep the vehicles to your rear and slightly out on your flanks. This will disperse the vehicles and also enable them to bypass you without too much extra maneuvering. During the search and attack, the AT section can bound ahead of you a short distance to secure a major linear danger area. The section will be able to cover your left and right flanks, enabling you

to cross quickly, and then fall in behind the platoon. Do not leave them on the road for a long period. Although they can see a good distance, so can the enemy, and two heavy weapon vehicles are ideal targets for indirect fire or ambushes. Also, never split your vehicles when you are moving. Those vehicles are exactly like a dismounted fire team. They are trained to support each other when bounding toward the enemy or breaking contact. The range for the M2 is 1,830 meters, so they don't have to be right next to each other to provide mutual support. Again, the section leader should not allow you to split his section.

When contact is made with the enemy, remember the Mk 19 on one of the AT vehicles. The weapon's 40mm grenades are the most responsive direct and indirect fires you will have to seal off the escape routes of the enemy as they break contact. While the platoon reacts to the enemy—and with the aid of the Mk 19, fixes the enemy—the M2 gunner can be moved into a position to finish him. A key point to remember is that the M2 and Mk 19 have a greater chance of bouncing off positions. Keep the dismounted soldiers at greater distances when using these two weapons. If you do hit a large position with bunkers or a dug-in position, the Mk 19 and M2 will be able to destroy them while you move with the flanking or assault element. After the objective is seized, the AT section becomes a critical weapon system when positioning for a counterattack. If the platoon is moving to an LZ or a casualty collection point, use the AT section to secure the platoon during movement; then place them on likely avenues of approach to maximize the defense of these two points.

During the MOUT attack, the AT section will be key in closing off mounted avenues of approach and providing the heavy weapons, dismounted, to the support-by-fire. The Mk 19 and M2 can be used to seal off buildings from each other and to reduce any enemy resistance inside buildings. The Mk 19 and the TOW can be used to create entries through walls and, if no friendly soldiers are in the building, to clear entire floors. The M2 can rubble almost any small buildings and destroy

many hardened positions the enemy may have built outside of buildings.

After the platoon has seized its objective, you can move all of the weapon systems into positions that will maximize a hasty defense against a counterattack. Remember that you cannot emplace TOWs in buildings or bunkers. The backblast and concussion can seriously injure or kill anyone in that enclosed area. You may also want to mark the danger areas on buildings and signposts behind them. This will prevent soldiers from moving behind them if they must fire.

The defense is an excellent time for a rifle platoon leader to take advantage of the AT section he is provided. If there is an armor threat, the section can dismount the TOW systems and mount the Mk 19 and M2 and serve as a screen out in front of the defensive lines. Since this is a mission essential task for the AT company, the soldiers are trained in it and hence are very useful when executing this mission. When the AT section is performing the screen mission, it will allow you to maximize your platoon manpower to construct the fighting positions and emplace obstacles.

A key item to remember in your priorities of work will be the construction of vehicle fighting positions and the importance of full rehearsals of the vehicles passing back through the defensive lines as the enemy is approaching. Some things to take into account are routes, replacing obstacles along the route after the vehicles pass, and identification of the vehicles when they approach the passage point. One technique is to have an infrared chemical light tied to the Mk 19 or M2 to signal that the vehicle has not been compromised.

While constructing the fighting positions for the AT assets, it may be necessary to man the M2 and Mk 19 with an 11B infantryman, temporarily. This will allow the TOW gunners to complete their priorities of work on their positions. You may also mount the TOW systems on the vehicle and dismount the M2 and Mk 19; again, remember that it may be necessary to man the Mk 19 or M2. During your priorities of work, you will need to mark trig-

ger lines for all of these weapon systems. This will be key in the platoon echelonment-of-fires plan. Use the section leaders as subject matter experts when emplacing these weapon systems.

When working for extended periods away from the company resupply point, the AT section can help carry extra MREs, water, and ammunition. First, make sure there is plenty of room to carry the vehicle necessities; then place whatever extra you can in the vehicle. This may include spare batteries and breach or marking kits. During extreme cold weather, the vehicle may be used to warm a soldier who has a cold-weather injury. The radios in the platoon command and control vehicles may also augment your own communications. The two radios in these vehicles will also allow crews to program your company internal frequency and the platoon frequency, allowing for better communication without having to switch channels or reprogram every time. This will allow you to talk at greater distances than a manpacked SINCGARS (single-channel, ground and airborne radio system) allows. This option may not always be available, but this is a radio that does not need batteries.

Used correctly, an AT section can be a very lethal asset for a light infantry platoon. Remember not to commit the section unless you have to, and when you do, make sure you can support them. The planning process with the platoon leader and the section leader will ensure the success of the mission. The AT section has both more firepower than the whole platoon and the ability to move quickly across the battlefield, therefore enabling it to fix and finish the enemy before he can inflict a large number of casualties on the dismounted infantry. Training with an AT section and a rifle platoon will allow a light infantry unit to be better prepared the next time our Army must face an armor or mechanized infantry force.

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Essential to Soldier Care

The Commander and the Chaplain

COLONEL WILLIAM V. WENGER
CHAPLAIN (COLONEL) JAMES P. CREWS

The commander and the chaplain in a unit have a unique relationship of mutual trust that can have a positive effect upon the soldiers. A good relationship with the chaplain gives the commander a fresh perspective on problems, a unique line of communication for soldiers, and an invaluable source of support, professionally and personally.

This relationship often begins with battalion command, as the Army does not assign Unit Ministry Teams (UMTs) below that level. The UMT comprises the chaplain and his assistant, and a good working relationship with the commander can only come through working as a team. One challenge is that the commander may be uncertain about how the chaplain contributes to the unit and its mission. For another, he is undecided about how to develop a good working relationship. Additionally, the chaplain, though older in age, is usually a junior officer with relatively little time in service. Sometimes the chaplain is a first lieutenant, or in some Reserve Component units even a second lieutenant chaplain candidate. This paper will address these and other challenges, demonstrating the value of the chaplain and addressing how a commander can take advantage of this valuable resource.

The chaplain brings to the battalion staff certain skills and talents not found in other staff officers. He has a non-threatening access to soldiers that is not available to most officers or senior non-commissioned officers. The chaplain is a helpful resource for the commander's professional strength and growth. The wise commander involves him at every

level of the unit and then listens to his observations.

The chaplain brings three important aspects to the commander. First, he brings a maturity and a perspective different from that of other staff officers. Because a chaplain must have a professional master's degree and practical experience in leading a local church or synagogue before becoming a unit chaplain, he is older and usually has more expertise in his field. Secondly, the chaplain has clear moral strength and integrity. His identity is not tied to the military, but to a higher calling, so

The chaplain's identity is not tied to the military, but to a higher calling, so his candor and truthfulness often counterbalance the hesitation of others to speak frankly with the commander.

his candor and truthfulness often counterbalance the hesitation of others to speak frankly with the commander. Thirdly, his training and experience generally give him more insight into human nature. This expertise can bring to the commander an understanding of personalities and their dynamics that he might not otherwise perceive.

On the other hand, the chaplain's limited experience with the military can present three disadvantages. While some new chaplains have prior service as enlisted soldiers or officers, the average chaplain does not have this experi-

ence and does not fully understand how the Army does things. Therefore, he (or she) must learn the system and learn it quickly to benefit the commander. Secondly, because chaplains are given direct commissions as first lieutenants, the average chaplain may not have a lieutenant's experience. He has missed out on the chance to learn from the mistakes second lieutenants usually make. Similarly, a chaplain in the rank of captain, having never served as a chaplain lieutenant, will often make military mistakes. Lastly, the chaplain does not have all the soldier skills one would expect from a captain. But these shortcomings can soon become advantages as the chaplain finds out about the military, brings a fresh perspective, and is involved in unit training. In the process of learning, he involves and teaches others.

The commander must assess the chaplain's experience and then use his level of competence to the soldiers' advantage. The commander can involve the chaplain in the proper training to make the most of his past experience and future contributions. The chaplain grows under the commander's watchful eye. He is eager to learn, and the commander must teach him.

Skills of the Chaplain

The chaplain contributes to the unit in a number of ways: by his involvement in the spiritual lives and religious growth of soldiers; by monitoring the morale and attitude of the unit; through his participation in problem solving; by means of his ability to set the example; by serving as a conduit for a two-way

flow of communication; by serving as a sounding board for the commander; and by assisting in solving the problems of soldiers and family members at the lowest possible level.

The primary mission of the chaplain in any unit is to conduct worship services, assuring the free exercise of religion for all soldiers. The chaplain is a skilled educator and teacher in moral character leadership. He can teach classes on such subjects as ethics, morality, leadership, suicide awareness, stress management, and values clarification. This institutional role is what he is supposed to do, by law and regulation.

Through his observation of and participation in unit training, the chaplain notices trends and subtle indicators that other staff officers may not perceive. If a unit has a morale problem, the chaplain can quickly see it and identify the problem. Too often, he is the only officer in the unit who will ask a soldier what he is doing instead of why he is doing it that way.

The chaplain is a critical participant in problem solving. He is an approachable point of contact for soldiers who have problems that cannot easily be resolved. The chaplain may not directly solve the problem, but he can intervene, asking the right questions of the right people. And he can help soldiers examine the problem itself, which may turn out to be one of perception instead of reality. The chaplain can seek information from both inside and outside the system. Confidentiality is key to his ability to function with trust and confidence within the unit. Soldiers must know that they can come to the chaplain in privacy and remain anonymous to others in the unit.

By his presence at unit training and in day-to-day activities, the chaplain can set the example for others to follow. His job is to see and be seen by all the members of the unit at every possible level. Soldiers who see the chaplain on PT runs do things a little better. Soldiers slogging through an obstacle course with the chaplain beside them develop respect, confidence, and trust in him and in themselves. By his presence during difficult times and performing

difficult tasks side-by-side with members of the unit, the chaplain encourages by example.

The chaplain aids the flow of information up and down the chain of command. This informal channel of communication can stop rumors, calm fears, alert staff members and commanders to issues, and sometimes make the commander aware of factors relevant to decisions he may have to make. The chaplain, knowing the commander's intent, can share that understanding with soldiers at the lowest level. The chaplain can also relay the perceptions of the soldiers to the commander. The intent of a decision may have second and third echelon effects that the commander has not considered or foreseen. As an information facilitator, the chaplain can help the commander arrive at the right courses of action and indeed arrive at remedial measures to offset unforeseen consequences.

The chaplain's role as a sounding board for the commander cannot be underestimated. He can listen to the commanders and reflect back to him

The perceptions the new chaplain gains by using his interpersonal skills, relationships, and problem solving will be valuable to the commander.

decisions that may affect the morale and welfare of soldiers. When allowed to be an active part of the unit's activities, the chaplain understands the soldiers and their personalities can help the commander make the best decisions possible for everyone concerned.

The chaplain has the opportunity to move freely through the unit, solving problems at the lowest level, by talking with soldiers and family members anywhere he finds them. The chaplain acts as pastor to people where they are. He should be included in all the official and formal activities of the unit, because it is in such settings that the soldiers often find it easier to talk with him. The chaplain who is readily accessible and involved builds trust and respect with the company commanders and first sergeants. He does not take every problem

to the commander. Instead, he works with the lowest level of command possible to solve the problems. If the chaplain routinely takes problems directly to the commander, soon the subordinate commanders will neither trust him nor confide in him. But he cannot hesitate to take a soldier's problem higher if it is not resolved at a lower level.

The chaplain cannot perform these tasks alone. Army doctrine directs the use of a chaplain assistant to help him with his duties, and the commander needs to make sure an assistant is assigned.

The chaplain assistant should have served a reasonable period of time with the unit and have strong soldier skills to aid the new chaplain's integration into the Army, the unit, and the field. Most of all, the chaplain assistant should have a strong desire to help soldiers.

Role of the Commander

The commander can take positive steps to insure a good relationship with the unit chaplain and to foster an affective and effective ministry:

The commander must build an atmosphere of mutual trust and confidence between him and the chaplain. This trust is built "down" by involving the chaplain in all of the unit's events, exercises, meetings, functions, and activities. The perceptions the new chaplain gains by using his interpersonal skills, relationships, and problem solving will be valuable to the commander. Once the bond is built between the commander and the chaplain, the channels of communication will be hard to break.

The commander must clearly communicate his expectations to the chaplain. Most chaplains are new to the military system; all are new to serving in the role of chaplain. The commander must provide the chaplain a framework and parameters in which to work. For example, the chaplain must attend all staff calls and briefings. Although the unit ministry team may not think these meetings are relevant to them, the commander needs feedback on the staff process that is best gained from the chaplain's perspective. Attending these

meetings makes the chaplain aware of the unit's short-term and long-term plans. He should visit all the subordinate units on a regular basis. His availability to soldiers at any time and any place builds trust and confidence in him and in the chain of command. Soldiers' problems do not always occur during duty hours or on drill weekends. The unit must see the chaplain at lane training, on the ranges, and during deployments. Wherever the unit flag goes, the chaplain should not be far behind.

The commander must involve the chaplain at every level of the unit and at every opportunity. He must be a part of the planning process, working closely with training and operations. He must work with the operations officer and find opportunities during the week for church services, masses, and other religious activities. These worship opportunities are not limited to the scheduled Sunday services. The chaplain must have input to the unit's standing operating procedures (SOPs). When casualties occur, he must be readily accessible. When people are seriously ill or dying, soldiers do not usually want social workers and psychiatrists; they want a person of faith. Every door in the unit should be open to the chaplain, and he should be involved in the total life of the unit with prayers at every opportunity and special services appropriate for the time of the year and the unit's training tempo. A commander should plan for prayer luncheons and ecumenical worship services before a deployment or a unit's annual training.

The commander must demonstrate his trust in the chaplain. If he reflects the importance of the UMT and the chaplain, subordinate commanders will trust the chaplain as an honest broker. The commander should attend worship services. It is amazing how attendance soars when commanders go to unit worship services. When the command knows the chaplain has the commander's ear, without retribution to the source of his information, soldiers will seek out the chaplain to pass information to the commander. The commander might ask the advice of the chaplain in front of others, as he would any other member of his staff. This

might be something the two have already discussed behind closed doors, but asking in public demonstrates his trust in the chaplain and inspires the trust of others.

The commander must give the UMT the resources it needs. If the chaplain is to go everywhere and do everything the commander wants him to accomplish, his team must have the necessary resources. He must have a vehicle and a radio and, if a chaplain assistant is not assigned to the unit, a driver as well. He should be provided extra rations to hand out when needed by soldiers he might find stranded on the side of the road, and medical supplies in case of emergencies. This resourcing of the UMT should also include training. The chaplain should receive the highest level of military education possible. Basic and advanced courses are mandatory, and the chaplain should be encouraged to enroll in the Command and General Staff Course as early as possible. The UMT should be sent to the suicide awareness and sexual harassment training sponsored by the Chief of Chaplains at the Menninger Institute, and should be involved in all aspects of unit training—combat lifesaver, drown proofing, nuclear, biological, chemical (NBC) confidence. This training will help insure the UMT's survivability on the battlefield and build confidence between the soldiers and the chaplain.

The commander must recognize the achievements of the chaplain and his team, just as he would recognize any other soldiers' success. Too often, commanders do not recognize the chaplain's contribution publicly. A small recognition in front of others will go a long way in building and sustaining trust. This might include giving the team appropriate awards for a job well done or sending letters of appreciation and commendation after an exercise. A personal note to the chaplain reinforces the relationship.

The commander must be able to expect and elicit candor from the chaplain. The commander should allow the chaplain free and direct access to him. The chaplain may have important insights into people and problems, but may be hesitant to disturb the com-

mander. The commander must encourage his input and be able to accept unpleasant news without overreacting. Few other people in the command will give him the unvarnished truth as often as the chaplain.

The commander has the responsibility to emphasize Army core values throughout the command. He and the chaplain can work to accomplish this with actions and training. Taking a different value each month, the commander and the chaplain can teach special courses on that specific trait. The chaplain can focus on it in prayers and talks as appropriate. Both the commander and the chaplain can model that behavior in real life. Through trust and confidence, the entire unit will see and know the relevance and validity of these core values.

The commander's close relationship with the unit chaplain can help forestall many problems. The commander can see the moral health of the unit and become proactive in taking care of the total welfare of his soldiers. The chaplain and the commander make an unstoppable team for soldiers when trust is developed; when the commander expects the chaplain's involvement throughout the unit; and when the commander listens. As all of these events come together, the commander will find it easier to meet the many needs of his soldiers, and this in turn will create a more cohesive, successful unit.

Colonel William V. Wenger was recalled to active service in May 1999 to serve as Deputy Adjutant General, California Army National Guard, and to be promoted to general officer. He has served on active duty, in the U.S. Army Reserve, and in the U.S. Army National Guard. He commanded battalion task forces in the mobilizations following the Los Angeles riots and the Northridge earthquake. He has commanded from platoon to joint brigade level and teaches each summer at the U.S. Army War College.

Chaplain (Colonel) James P. Crews, during more than 22 years of active duty, has served as battalion, brigade, division, and deputy corps chaplain with Infantry, Armor, Field Artillery, Combat Support and Combat Service Support units. He served as a hospital chaplain at Fort Polk, a community chaplain in Hawaii, and the installation chaplain at the National Training Center, and currently serves as the Command Chaplain, U.S. Army Japan/9th TAACOM.

THE X CORPS EVACUATION OF THE WONSAN BEACHHEAD

MAJOR ANTHONY R. GARRETT, U.S. Army, Retired

EDITOR'S NOTE: Given today's ever-changing demands on U.S. forces, coalition operations such as those of the Gulf War may be the best way to assure international support and a consensus on the goals to be achieved. This was as true in the highly fluid situation of the early stages of the Korean War as it is today.

Major Garrett's article highlights the complexity of America's efforts to retain Allied support, while showing once again the criticality of timely, accurate information from senior military personnel on the ground. It was only when General J. Lawton Collins himself visited Korea that he was able to provide President Truman and the Joint Chiefs of Staff with the information they needed to formulate a course of action. We would do well to remember those lessons as we continue the business of forming the new brigade organizations that will be committed on future contingencies.

On 28 November 1950, in response to Chinese attacks on the Eighth Army north of Pyongyang and X Corps at the Chosin reservoir, General Douglas MacArthur called an emergency conference at his Tokyo residence to discuss possible moves to counter the Chinese offensive. Lieutenant General Walton H. Walker, Eighth Army commander, and Lieutenant General Edward M. Almond, X Corps commander, flew back from the front to meet with MacArthur. Because the situation in the Eighth Army sector appeared the more precarious, the meeting focused on how to help General Walker regain control of the situation. MacArthur understood the need to extricate the 1st Marine and 7th Infantry Divisions from the fighting at the Chosin; nevertheless, he directed Almond to maintain contact with the Chinese and withdraw his forces to the Hungnam-Wonsan beachhead. This, he felt, would prevent the Chinese from turning the Eighth Army's flank and also preserve the X Corps. The Joint Chiefs of Staff (JCS) opposed this course of action, preferring instead that the Eighth Army and X Corps estab-

lish a contiguous defensive line across the narrow waist of Korea. On 4 December, however—faced with MacArthur's growing pessimism and strong objection to their position—the Joint Chiefs acquiesced and directed MacArthur to preserve his forces by ignoring the region northeast of the waist of Korea, except for strategic and tactical considerations relating to the security of his command. In other words, evacuate northeast Korea.

In the end, the decision to evacuate the Wonsan beachhead may have resulted more from MacArthur's pessimistic appraisal of the situation, and from political realities, than from an untenable tactical situation.

On 29 November MacArthur notified the JCS of his plans to withdraw the Eighth Army as far as necessary to prevent its envelopment by the Chinese. The X Corps, he explained, would withdraw to the Hungnam-Wonsan area and establish a beachhead. He then went on to assert that the current disposition of the X Corps actually threatened the flanks of the Chinese Army attacking Walker's forces. He failed to explain how this was possible, given the fact that the 1st Marine and 7th Infantry Divisions were currently executing a withdrawal under pressure from the Chosin Reservoir. Only the 3d Infantry Division, located near Wonsan, was available for any counterattack. Furthermore, any such attack would be across the Taebaek Mountains. In Almond's opinion, such an attack would result in the destruction of the 3d Division.

Finally, MacArthur disagreed with the JCS on establishing a defensive line across the narrow waist. In at least one respect, his rationale for not establishing this defense contradicted his claim that the X Corps posed a threat to the Chinese flank. MacArthur argued that the rugged mountain range separating Eighth Army and X Corps made it "impracticable" to establish a contiguous defensive line. Accepting this argument, it is difficult to understand how X Corps could threaten the flank of the Chinese forces operating on the *other side* of the Taebaek Mountains. Certainly, the mountain range would hinder X Corps' ability to maneu-

ver against the Chinese flank. Realistically, the tactical situation limited the options available to the United Nations forces. The Eighth Army was withdrawing to subsequent defensive positions in an attempt to establish a coherent defense. Simultaneously, X Corps was decisively engaged in its fighting withdrawal from the Chosin Reservoir. Under these circumstances, any coordinated operation of Eighth Army and X Corps was unlikely. This does not suggest that the UN Command was facing imminent defeat. To the contrary, field commanders were already identifying opportunities that would allow them to wrest the initiative from the Chinese.

On 3 December, the JCS received another dismal report from MacArthur that heightened anxiety in Washington. MacArthur explained that unless he received immediate reinforcements in significant numbers the Chinese forces would continue to push the UN forces into successive withdrawals. He predicted that each withdrawal would diminish the fighting strength of his forces and lead ultimately to the occupation of beachheads where the troops could do no more than hang on. In MacArthur's opinion, the Chinese were fighting an "undeclared war" that, if left unchecked, would continue the attrition of the UN Command and lead to its destruction.

In Washington, a joint conference of the Departments of State and Defense met to consider the situation and develop recommendations for President Harry Truman's consideration. The Joint Chiefs believed that an evacuation of Korea would be a political embarrassment to the United States. Since the U.S. had committed forces under the UN flag, a withdrawal would undermine the commitments of the Truman Doctrine. With respect to China's entry into the conflict, Admiral Forrest P. Sherman, Chief of Naval Operations, suggested that if China wanted war, the United States should get down to the business of defeating her. The State

Department, represented by Dean Acheson, viewed the situation in terms of the Cold War struggle. In his opinion, fighting China would be "fighting the second team," while the first team—the Soviet Union—took delight in seeing the U.S. bogged down in an Asian war with China.

Finally, the group agreed to recommend that MacArthur continue to consolidate his forces in the Hungnam-Wonsan beachheads. Truman accepted this recommendation, and on 4 December the JCS instructed MacArthur to focus on the preservation of his forces by consolidating them into beachheads. The JCS also decided to send General J. Lawton Collins, Army Chief of Staff and Executive Agent for the JCS, to Korea to assess the situation in view of MacArthur's pessimistic reports.

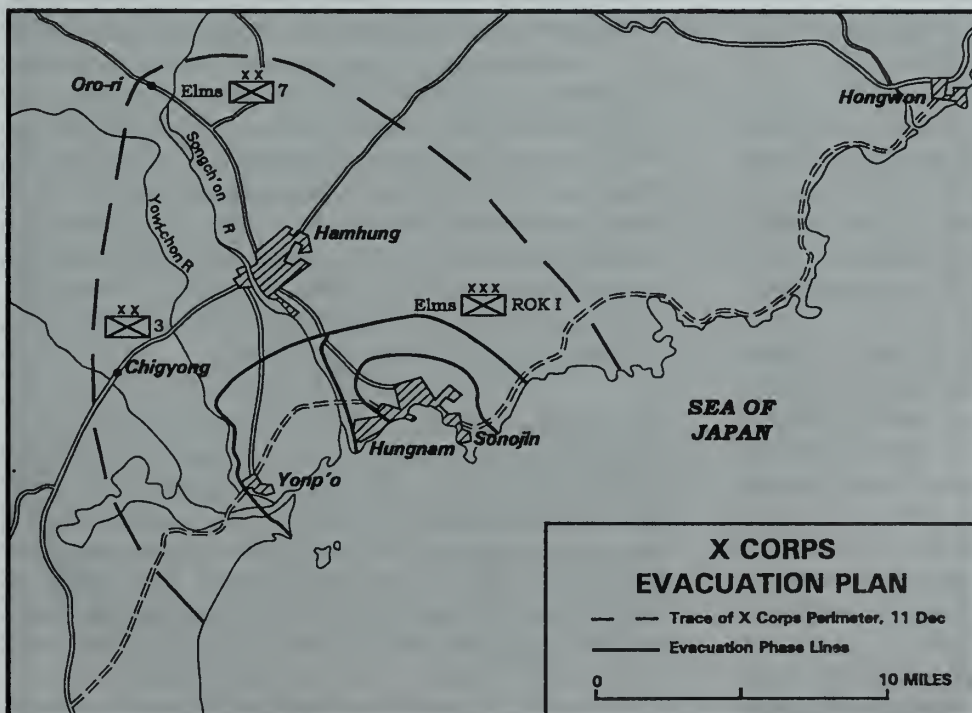
In Washington, the crisis, as reported by MacArthur, could not have come at a more inopportune time for the Truman Administration. The Republicans—reveling in their recent success in the November 1950 congressional elections—were subjecting Truman to intense scrutiny for being "soft on communism." The most vocal opponent was Senator Robert Taft of Ohio, who cited the Administration's failure in national security issues: the secret deals at Teheran, Yalta, and Potsdam; the loss of atomic monopoly; the Alger Hiss espionage scandal; the Communist victory in China; and now the debacle in Korea.

The debate over Truman's foreign policy, especially in regard to China, limited his flexibility in responding to the current crisis. If he approached the Chinese on a cease-fire, the Republicans would probably renew their "soft on communism" charges. Furthermore, Truman Doctrine mandated that Washington *confront* communism. MacArthur's reports, if accurate, indicated that the Chinese were about to destroy the UN Command. Public support for the conflict was indifferent at best. In all likelihood, the nation would not support the deployment of additional forces to Korea.

And yet, the President could not stand by and allow the Chinese to destroy UN forces.

Compounding the problem were the growing tensions with Great Britain over the U.S. approach to the current crisis. On 4 December British Prime Minister Clement Attlee arrived in Washington to confer with Truman on the crisis. Attlee's visit was an attempt to assure the House of Commons and the British people that the United States would not commit its allies to a war with China without their willing consent.

During the talks, Attlee explained that part of the problem concerning America and her allies in regard to the Korean War was the continuing public complaints by MacArthur about the "privileged sanctuaries" of the Chinese and



European policy toward the Far East. In response, Truman issued a directive to all U.S. officials prohibiting public statements without prior clearance from the White House. Truman hoped the directive would curb MacArthur's frequent public statements at odds with Truman's intent. Ultimately, it was MacArthur's failure to comply with this directive that resulted in his dismissal.

While reaffirming Britain's commitment to the Korean effort, Attlee expressed hope that the UN would continue to be the forum for taking any action against China. Truman assured the Prime Minister that America's involvement in the conflict was in support of the UN and that any future U.S. action would be in support of UN decisions. The later stages of the talks dealt with issues of European security, and specifically with the formation of the North Atlantic Treaty Organization. The conference ended with Truman and Attlee issuing a joint communiqué announcing the results.

While the meetings glossed over significant differences, such as the recognition of Communist China, two aspects influenced the decision to withdraw from Wonsan. First, Dean Acheson, attempting to allay Attlee's concerns over extending the war to China, explained that there were "not many of the President's advisers who would urge him to follow that course." Second, Truman and Attlee agreed that it would be advantageous to achieve a cease-fire along the old 38th parallel. By definition, such a proposal would entail the withdrawal of UN forces to positions south of that former demarcation line. Having abandoned the goal of forcefully unifying Korea, Truman could focus on withdrawing U.S. forces below the 38th parallel. His principle concern was probably whether Eighth Army and X Corps could escape destruction by the Chinese. General Collins, returning from his fact-finding trip to Korea, would provide the answer to that question.

The Tactical Situation

General Collins had arrived in Tokyo on 4 December to obtain firsthand information on the situation. After a brief visit with MacArthur, he flew to Seoul and met with General Walker. Walker explained the general situation and stated that Eighth Army could withdraw to Pusan and hold indefinitely, provided the X Corps reinforced him. He felt that the growing gap between Eighth Army and X Corps made it impossible to defend Seoul along the Han River. In his opinion, such a defense would threaten his forces with encirclement.

Collins departed Seoul on 6 December en route to X Corps headquarters in Hamhung. Reflecting on Walker's briefings, he became convinced that Eighth Army's situation, although serious, was not as perilous as MacArthur had reported. Almond met Collins at the airstrip and took him on an aerial reconnaissance of X Corps defensive positions covering the beachheads. He briefed Collins on the status of the withdrawal of forces from Hagaru-ri and expressed the belief that X Corps could complete its withdrawal into the beachheads and defend them for a considerable period.

General Collins left Korea with an assessment of the situation that differed markedly from MacArthur's reports.

Drawing on the briefings of field commanders and a personal reconnaissance of the front, Collins did not believe that the Chinese could force the UN Command out of Korea. He did agree with MacArthur, however, that the U.S. should evacuate Korea if the UN chose not to give full support to operations against the Chinese attacks. Collins arrived back in Washington on 8 December and immediately briefed Truman and Attlee, who were then concluding their conference. He ended his briefing by expressing the opinion that while the situation was serious, it was not critical.

Collins's analysis of the tactical situation was correct. Although Eighth Army and X Corps had suffered significant losses of personnel and equipment, they still had enough forces to conduct a withdrawal and defend the beachheads. The X Corps—with its lines of communication becoming shorter and with extensive stockpiles of supplies in the beachheads—could defend Hungnam-Wonsan for an extended period. Given the primitive nature of the Chinese logistics system, and the fact that they had suffered significant losses at the Chosin Reservoir, it was doubtful that they could continue the offensive. Also, the UN Command had complete and unchallenged air supremacy, made possible by forward-operating bases in Korea and the carrier-based aircraft operating in the Sea of Japan. After reorganizing and reconstituting the forces in the beachheads, the X Corps could probably have resumed the offensive, assuming the UN Command received reinforcements. Certainly, once the X Corps established its defense in the beachheads, there was no danger of the Chinese pushing the Americans into the sea.

Clearly, MacArthur's defeatist appraisal of the situation in Korea convinced the JCS and the Truman Administration that American forces were in danger of annihilation. Although General Collins's report on the situation provided a more realistic assessment, it would not influence the political decision to evacuate the Wonsan beachheads.

Having failed to unify Korea by force and limit the scope of the conflict, as evidenced by the entry of Chinese forces, Truman now attempted to set the conditions for a cease-fire by withdrawing X Corps. What Truman and others failed to recognize was that maintaining the Wonsan beachheads could have been used as a bargaining chip in bringing the Chinese and North Koreans to the negotiating table. There was no tactical imperative for the withdrawal of forces, nor was there any certainty that a unilateral withdrawal by the UN would have the desired effect. In the end, it was political considerations instead of operational necessity that led to the evacuation of the Wonsan beachheads.

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The Battle for Coco Solo

Panama, 1989

Major Evan A. Huelfer

For several years preceding the U.S. intervention in 1989, Panamanian strongman General Manuel Noriega had subjected American citizens living in Panama to constant harassment. From early 1988 until May 1989, the U.S. Southern Command (SOUTHCOM) had attributed more than 1,000 instances of harassment to the Panamanian Defense Forces (PDF). After a string of serious incidents in May 1989, including the abduction and beating of an American sailor and Noriega's interference with Panama's presidential election, President George Bush took action. On May 11 he recalled Ambassador Arthur Davis and dispatched nearly 2,000 soldiers to Panama and warned that he "would not rule out further steps in the future."

The United States exercised its rapid deployment capabilities by rushing to Panama two light infantry battalions from Fort Ord, California, a mechanized infantry battalion from Fort Polk, Louisiana, and a Marine company from Camp Lejeune, North Carolina. As the situation stabilized, battalions from Fort Ord's 7th Infantry Division began to rotate into Panama on three-month tours. Their mission was to protect American lives and property and to exercise freedom of movement rights under the Panama Canal treaties.

My battalion—4th Battalion, 17th Infantry—began its rotation to Panama on 29 October after an intensive train-up period. This pre-deployment training focused on civil-military operations, rules of engagement, and military operations on urban terrain (MOUT), and included numerous live-fire exercises. The high training tempo throughout 1989 would later yield huge dividends in combat.

Soon after our arrival in Panama, the four companies deployed to various points around the northern mouth of the canal. Company C settled in at Coco Solo, a small community to the east of Colon, Panama's second largest city. The company established operations in an abandoned wing of Cristobal High School, a satellite school for American students residing in the area. From this base, the unit conducted security patrols in the surrounding areas to assure American residents of their safety, show an American presence to the nearby PDF troops, and gather intelligence on their routines.

The greatest potential threat in this area stemmed from the 8th PDF Naval Infantry Company, located only about 200 meters away. Its boats sat moored in a dockyard behind the headquarters building, at about the same distance. For five weeks before Operation *Just Cause* began, the soldiers of Company C co-existed with their future adversary.

Following a botched attempt to topple Noriega's regime in October 1989, the new SOUTHCOM Commander, General Maxwell Thurman, developed OPLAN BLUE SPOON, a contingency plan to invade Panama and replace Noriega with democratically elected officials. Critical to BLUE SPOON's success was the neutralization of the PDF. Due to operational security precautions, the BLUE SPOON contingency plan was not briefed to 4th Battalion below platoon leader level. Still, with innovative and imaginative training, the junior leaders found ways to rehearse the mission without compromising security. Through visual observation, mental wargaming, and interactive discussions, all leaders became thoroughly familiar with the concept of the operation.

Company C had a solid group of officers at its helm. The commander, a 1984 West Point graduate, had just taken command in June. But in the six months before *Just Cause*, the company had spent most its time on deployments or out on training exercises that included live fires. The executive officer, who had prior enlisted experience in the Marine Corps, had been in Company C for two years, most of that time as a platoon leader, and his expertise kept the unit functioning smoothly. Company C had two of the most senior platoon leaders in the battalion. The 1st Platoon leader, a Norwich graduate, had been in the job for 18 months, and I had led 3d Platoon for more than 14 months. A newly minted West Point graduate who had just arrived in September led 2d Platoon. Despite his inexperience, however, he would lead the platoon into dangerous combat only three months after taking charge.

All five officers had successfully completed the challenging Ranger Course, which enhanced their tactical competence as well as their self-assurance. As a group, they had tremendous confidence in the ability of their men to accom-

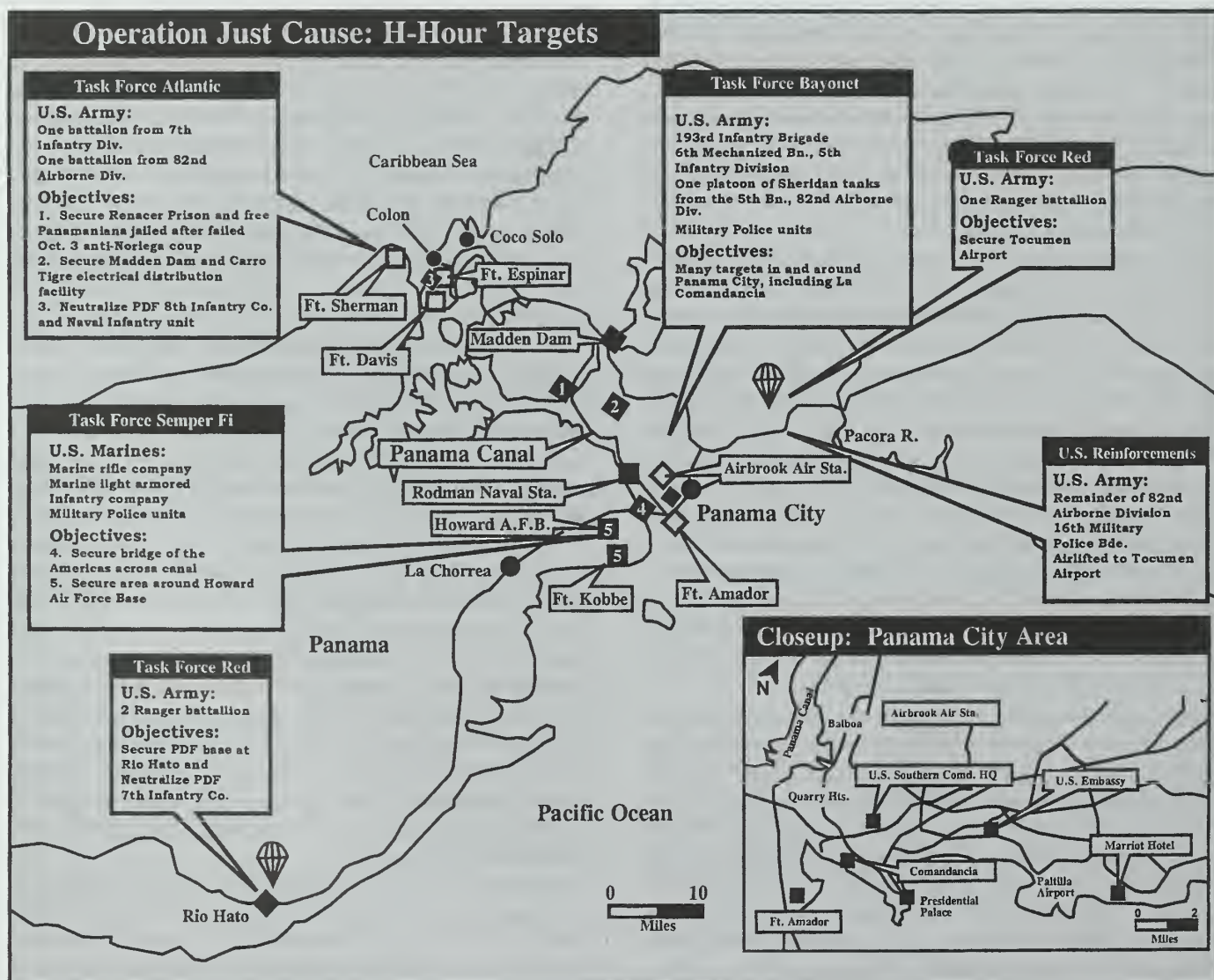
plish the most difficult missions. The company had succeeded time and again under strenuous training conditions, and its leaders felt that it would succeed in combat as well.

In mid-December, the company commander began to up the ante with the PDF. He directed more aggressive surveillance, including platoon-sized patrols provocatively close to the PDF headquarters. The platoons would establish a position in the Southern Housing Area, directly across from the PDF building, then continue with the patrol after a short time. On occasion, a 20mm Vulcan anti-aircraft gun would be towed into position and pointed at the building to augment the infantry platoon's intimidating posture. At first, these demonstrations unsettled the PDF soldiers but after a while only served to lull them into a false sense of security.

The commanding officer of the 8th PDF Naval Infantry Company had assumed command of his unit only three days before *Just Cause*. Although the menacing presence of the Vulcan in front of his headquarters had alarmed him, other PDF officers had played down his fears. They told him not to worry—the Americans had been doing that every night for the past 15 to 20 days. This deception proved vitally successful once *Just Cause* commenced.

On 15 December Noriega installed himself as head of the Panamanian government, declared himself "Maximum Leader," and announced that Panama was in a "state of war" with the United States. The very next night, PDF soldiers shot and killed an American Marine at a roadblock. A Navy SEAL captain, innocently sitting with his wife in the next car, witnessed the murder. PDF soldiers on the scene detained this couple and hustled them off to a secure location, where they beat the officer and harassed his wife. They repeatedly kicked the officer in the head and groin and threatened him with death if he did not reveal details on his unit and assignment. Within hours of these two incidents, SOUTHCOM placed all units on alert. Company C deployed to its BLUE SPOON assault positions as specified, but after several hours of tense waiting, all units stood down and returned to normal operating procedures.

Back in the nation's capitol, top brass scrambled in preparing to brief the president. On 17 December, General Colin Powell, Chairman of the Joint Chiefs of Staff, had recommended firm action in this case to Secretary of Defense Richard Cheney. After two hours of consultations with his top advisors, President Bush was convinced that an invasion



was the right thing. The formal order issued the next day established H-hour for the invasion, at 0100 on 20 December. Elements of the 82d Airborne Division at Fort Bragg and Ranger units from two locations in Georgia would parachute in at that precisely synchronized jump-off time.

After the killing of the Marine Corps officer, Company C resumed its routine schedule of patrolling at Coco Solo. No one knew that other units in the United States had been alerted for an invasion. On 19 December, the brigade tactical operations center notified our company commander to report for a briefing at 1830 hours; there, he learned for the first time that his soldiers would be going into combat that night.

He returned to Coco Solo two hours later and gathered the key leaders and said, "H-Hour is tonight at 0100 hours." The air was heavy with tension. My mind raced forward to all the things that had to be done in a few short hours.

At 2100 the company assembled in the hallway so the commander could brief all of the soldiers one last time. Everyone was nervous but confident that we would succeed. Company C retained the exact same mission as the BLUE SPOON contingency plan that we had rehearsed. After the commander finished his short talk, the soldiers returned to their platoon areas for final preparations. Earlier in the evening, before the commander had returned from brigade headquarters, the XO had taken the initiative and issued the company's combat load of ammunition. When XVIII Airborne Corps signal operating instructions arrived for the company, he assumed that something was out of the ordinary for that night's operation.

Since the platoons had less than two hours before departing, little time remained for issuing detailed operations orders. The platoons spent most of that precious time conducting backbriefs and final inspections; by then, every soldier in the company knew exactly what he had to do anyway. As I issued final instructions to my platoon, I made a conscious effort to exhibit confidence as we all prepared for our first taste of combat. But like everyone else, I waged a battle with my own personal fears.

The PDF at Coco Solo had successfully concealed both their strength and their intentions. Our battalion intelligence officer had estimated 100 to 115 soldiers in the naval infantry company, who were armed with a mixture of American-made and Soviet-made weapons. The heavy machineguns on the boats accounted for their most potent threat. Docked at the naval yard were two Vosper patrol craft with 20mm chain guns, two Swift ships with .50 caliber machineguns, two PT boats with one .50 caliber machinegun, and several other boats in dry dock. These heavy weapons, potentially the greatest threat, earned the most attention during planning.

The battalion commander stipulated five major concerns regarding operations at Coco Solo:

- He could not allow the boats to escape with their firepower intact.
- He had to protect U.S. citizens in the area.
- He had to minimize collateral damage to private property.
- He had to prevent small groups of armed PDF soldiers

from escaping the initial battle.

- He had to prevent the PDF from using their heavy machineguns to influence the battle.

Company C's mission was to neutralize the PDF company, and the commander had a variety of units at his disposal. Besides his organic assets of three rifle platoons, a 60mm mortar section, and an antitank section, he also had control over an attached platoon from the 82d Airborne Division, a platoon from the 549th Military Police Company, and two 20mm Vulcan anti-aircraft guns from the 2d Battalion, 62d Air Defense Artillery.

With these resources, our company commander formulated a plan. The MP platoon would seal off access to Coco Solo by the main road to the east. Their vehicle-mounted M60 machineguns would provide ample firepower for the task. The 3d Platoon would block the PDF's possible escape to the south. The 1st Platoon would secure the PDF boats at the dock to prevent their escape to the west by water. The attached platoon from the 82d Airborne would provide suppressive fires from the Southern Housing Area directly across from the PDF building. One of the Vulcans would

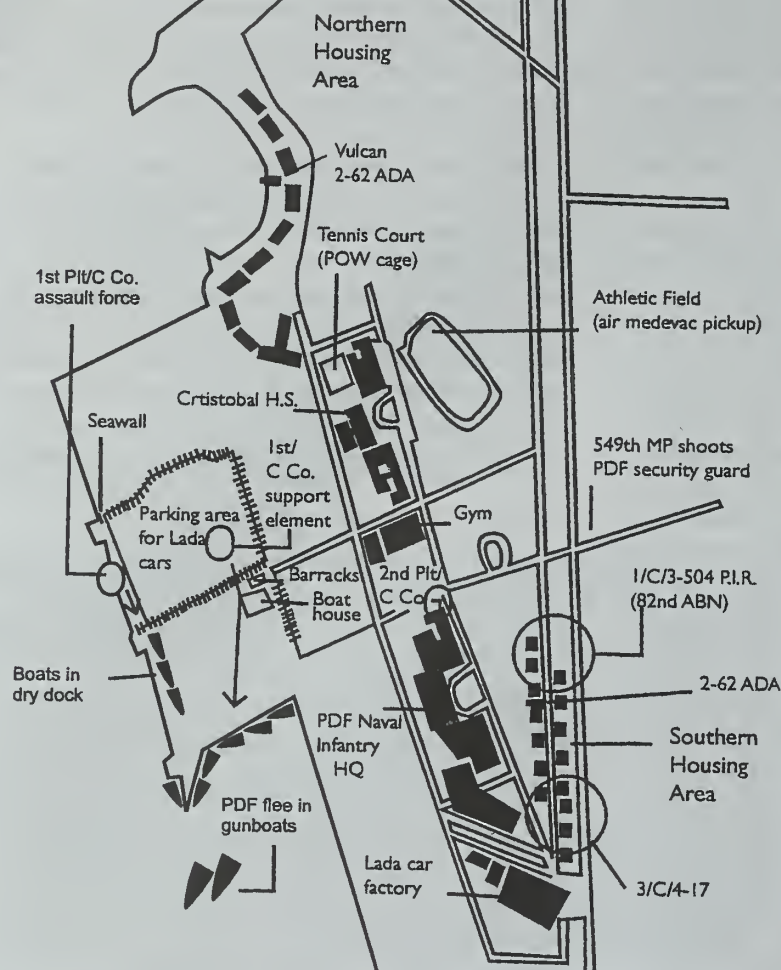
The 2d Platoon, the main effort, would enter the PDF building from the third floor of an adjacent building and clear it, top to bottom.

also be placed at this location to augment the fires. The 2d Platoon, the main effort, would enter the PDF building from the third floor of an adjacent building and clear it, top to bottom. The other Vulcan would be positioned along the water's edge in the Northern Housing Area to destroy any boats that tried to escape to the north out of the Manzanillo Bay. The mortar section would move to a position from which it could place indirect fire on the boats, if needed, and the antitank section personnel would be divided among the rifle platoons.

In case Company C needed additional fire support, an Air Force AC-130 Specter gunship was scheduled to be on station circling overhead and would be controlled by the company's fire support officer (FSO). Unfortunately, the AC-130 did not arrive on station when the company needed it. When it did arrive, it was too late to be useful. The company 60mm mortar section was also a key fire support asset, but the rules of engagement stipulated that indirect fires had to be approved by the brigade commander. Planners had implemented this control measure to limit collateral damage to the surrounding area.

As H-hour approached, soldiers went about their last-minute preparations. Each soldier carried a basic load of 210 rounds in seven magazines for his individual weapon, plus two or more hand grenades. Some carried additional rounds for the machineguns, demolition materials, or antitank rockets. Nobody seemed to mind toting extra firepower. Every soldier wore a protective vest and kevlar helmet and carried at least four quarts of water. Leaders also had night vision

Manzanillo Bay



devices, binoculars, radios, and flashlights. Altogether, the typical combat load exceeded 50 pounds without even counting the rucksack. Aside from the physical preparation for combat, some had to ready themselves emotionally as well.

To ensure that the attack would not be compromised, elements tried to deploy to their assault positions as routinely as they had done on previous nights. Only three nights had passed since the last full-scale alert. At 2300, 3d Platoon began its infiltration, by squads, to the Southern Housing Area. As I departed with one of the squads into the tranquil darkness, I passed a man casually walking his dog. It struck me how peaceful it must have been to be ignorant of the impending action; he probably did not know that his community would be torn apart in a few short hours, and many innocent people would find themselves in a combat zone. This thought came to fruition for hundreds, including three teachers at the school where we lived, who were tragically killed at one of our battalion's roadblocks.

Once the entire platoon had assembled, the men began to

evacuate all occupants from their homes and consolidate them in the house farthest from the spot where the major action would be. Many of the evacuees were dependents whose spouses had already been alerted to deploy somewhere else as part of the BLUE SPOON contingency. The 1st Platoon began moving to its assault position at 2330 hours. The 2d Platoon assembled in the school's gymnasium at midnight.

Sometime around midnight, a U.S. counterintelligence unit intercepted a call to the PDF's Military Zone II headquarters in nearby Colon. The caller said, "The party's on for one o'clock. Get out of the area." Shortly before the shooting began at Coco Solo, the commander of the naval infantry company received a call from his immediate supervisor, a PDF lieutenant colonel, who told him to reinforce security around the complex because a U.S. operation "was about to go down." He recalled later that this was all he had been told; nobody had explained *what* was going to happen. He had expected repercussions for the killing of the American officer, but not a full-scale invasion of the entire country. Lacking further guidance, he ordered one platoon to defend against U.S. forces from their sand-bagged windows at the front of the building and another platoon to man the boats out at the dock. He envisioned their ultimate escape to Colon, two nautical miles away.

One incident at Coco Solo proved to be one of the most controversial and significant actions. At H-26, as platoons waited in their assault positions, the platoon sergeant for the MP platoon spotted several men in the woodline near his blocking position. He said that the men were using a radio to report American positions. He relayed this information to his platoon leader and later said he was ordered to "take that position and silence that radio at all costs." The battalion operations officer later refuted the story, saying, "He didn't have an order. He didn't have a mission to take anything down, simply to block."

The MP said that when he approached the group of men and demanded their surrender, one of the men jumped him, and in the ensuing scuffle, he shot the assailant point blank in the chest, killing him instantly. The other men he had spotted quickly came out of the woods and surrendered.

Because the rules of engagement in the operations order authorized deadly force against an armed enemy after 0030 hours, and the shooting occurred at 0034, his actions fell within legal parameters. Due to the unclear circumstances surrounding the incident, the case was later referred to the

Army's Criminal Investigation Command, but was dropped for lack of evidence.

However justified the MP's actions may have been legally, they certainly jeopardized the entire operation tactically. His decision to fire a weapon before getting clearance from the commander had serious ramifications. Along with the recently slain PDF soldier, surprise became the second casualty of the night. In a location where no shooting was expected, the sound of that single gunshot, combined with the rising tension, triggered an irreversible sequence of events. At H-26, synchronized or not, Operation *Just Cause* had begun for Company C. And for the most part, no one except the MP sergeant knew, at the time, what had happened.

Within minutes, PDF soldiers began scrambling out of the back of their building toward the boats. This may have coincided with the warning call to the PDF company commander to prepare defensively, but it was more than likely linked to the gunshot. The company XO sat in a sand-bagged bunker overwatching the street behind the PDF building. The bunker position protected two M60 machineguns and an M203 grenade launcher to seal off the escape route to the dock. But to his dismay, it was still long before H-Hour when the enemy fled in strength. He immediately radioed the company commander and requested permission to open fire. Some of the boats started their engines at this time, and it appeared that they were trying to escape before the trap could be closed.

The company commander notified battalion of the situation and asked permission to initiate early. Because of the relative proximity of the battalion's objectives, the gunfire would be heard at other locations. The battalion commander was concerned that his other companies might not yet be in place.

This contingency had been addressed during the planning process: The brigade commander had stated that early activity would not initiate H-Hour prematurely, especially since the operation depended upon the synchronized arrival of other units flying in from the United States. The battalion commander said that if the PDF escaped into the water with their firepower intact, it could spell disaster for other U.S. units in the vicinity. As a result, the brigade commander did not hesitate to approve the spontaneous request for early initiation. The battalion commander immediately relayed the message to Company C.

After a surrender request delivered by bullhorn to the PDF drew no response, the battalion commander ordered the Vulcan to commence firing on the building. The building shuddered as the initial barrage blasted the upper two floors and then worked its way down. The Vulcan spewed out approximately 1,100 rounds before jamming. Simultaneously, the attached platoon launched some 60 antitank rockets (a mixture of both AT4s and LAWs) at designated places on the building. The 3d Platoon opened fire on designated targets within its sector. With all weapons at Coco Solo erupting at once, the sound reached a deafening crescendo. The XO unleashed his two M60 machineguns on the PDF guard shack protecting the dock's entrance and sprayed any PDF soldiers still making their way to the boats. If he had been

able to fire earlier, he could have caused significantly more casualties. Due to the unexpected initiation time and the pause to get permission to engage, many PDF soldiers had already made it safely to the boats across the 200 meters of open area on the docks. From there, they would be in an excellent position to spoil 1st Platoon's mission of securing the boats, which should have been lightly defended.

The 1st Platoon infiltrated toward its objective from the north along a seawall and then divided into two elements as it approached the dock. The smaller support element, led by the platoon sergeant, was assigned to penetrate and destroy a small barracks and boat house on the dockyard and, from that location, support the assault element with suppressive fires. The larger assault element had almost moved into po-

The smaller support element, led by the platoon sergeant, was assigned to penetrate and destroy a small barracks and boat house on the dockyard and, from that location, support the assault element with suppressive fires.

sition when some of the running PDF soldiers spotted it and fired on it, from the hip, on the way to their boats. An intense exchange of gunfire opened up on the dockyard, probably even before the Vulcan had initiated its barrage in front of the PDF headquarters. A 1st Platoon gunner shot one PDF soldier in the head. Only his glasses and a large pool of blood remained after his comrades dragged him along onto a boat. As one of the boats made its way out into the water, a soldier fired upon it with his squad automatic weapon (SAW). But enemy fire converged on 1st Platoon's men from almost every boat moored at the dock, effectively pinning down those at the front of the assault element. The situation rapidly degenerated into confusion well before H-Hour.

The 2d Platoon had been staging in the gymnasium in preparation for an assault on the PDF headquarters building. The plan called for two quick firepower demonstrations by the Vulcan and a platoon firing antitank rockets to convince the PDF of the futility of resisting. If the PDF did not surrender, 2d Platoon would enter the building on the third floor and clear it from top to bottom. The Vulcan's initiation at 0043 was 17 minutes earlier than 2d Platoon had expected.

As antiaircraft, rocket, and small arms fire pummeled the PDF building, 2d Platoon readied to go into action. It first had to traverse an open area 75 meters wide between buildings. The leader of 1st Squad tossed a smoke grenade into the clearing to conceal his squad's movement. Before the smoke had thickened, 1st Squad dashed across the gap to the front side of a Chinese restaurant, an attached extension to the PDF building. The smoke grenade's initial flame silhouetted the moving soldiers against the night sky and immediately drew PDF fire upon them. Although no one was hit, the squad leader recalled tracers whistling by overhead and

churning up the grass between his legs as he ran. Once 1st Squad safely made the dash, the rest of 2d Platoon crossed the gap under the concealment of the billowing smoke.

No one showed more fire discipline than the platoon's point man, who was a street-wise soldier. With a finger nervously gripping the trigger of his M16, he burst through the door of the Chinese restaurant into the darkness beyond. The electricity in the entire structure had gone out with the initial barrage. Three or four people passed by to his immediate front, but he did not fire—they were civilians. While he fired his weapon many times in the subsequent two hours, he showed excellent judgment in not shooting in that split second. An error, even under tremendous duress, would easily have produced several casualties.

The 2d Platoon continued to grope its way through the building to the top floor. Without a diagram of the interior layout, they cautiously probed though the darkness, not knowing what to expect or precisely which way to go. Several wrong turns exacerbated their frustration as well as their anxiety, especially since the Vulcan still hammered away at the adjacent building and its tracer rounds could be seen streaming past the windows. The 2d Platoon gathered 17 civilians inside the building, including an old woman who had fainted when surprised by two camouflaged soldiers. Several males, fearing that they would be shot, had to be coaxed from their hiding places. The platoon's soldiers safely escorted all of these civilians out of harm's way.

With that time-consuming task completed, the platoon finally found the third floor door connecting to the PDF headquarters. The platoon leader paused to glance out the window. To the front, the Vulcan's red tracers pummeled the building with a thundering roar. To the rear, he could see 1st Platoon exchanging its red tracers with the PDF's green tracers in a vicious firefight. He was almost mesmerized watching when his radiotelephone operator (RTO) pulled him back down and admonished him to be more careful.

Once on the PDF side of the door, the platoon leader detached his 3d Squad to fight the fire. Those soldiers never did rejoin the rest of the platoon in clearing the building.

Once the preparatory fires had ceased, 2d Platoon received clearance to begin the assault. Only a locked door separated them from the PDF on the other side. One soldier placed a three-pound charge of C-4 explosives on the door with a time fuse. The blast jolted the door open but also sparked a huge fire. The room they occupied happened to be a garment shop, with loose cloth spread everywhere. Once the cloth ignited, the fire quickly expanded. Soldiers hurriedly tried to put it out so they could continue with their mission, expending 18 fire extinguishers in the process, but the fire soon raged out of control. The smoke from both the fire and the explosion combined to produce noxious fumes that made

some of the soldiers sick, including the platoon leader. The stench from the burnt cordite in the enclosed areas proved too strong for their knotted stomachs. Once on the PDF side of the door, the platoon leader detached his 3d Squad to fight the fire. Those soldiers never did rejoin the rest of the platoon in clearing the building. After the fire had consumed the room in which it began, they had to exit the building the same way they entered. Through this freak accident, 2d Platoon had lost a third of its firepower even before it began to confront the enemy at hand.

When the two lead squads entered the PDF side of the doorway, they did not know what to expect. To their amazement, the entire top floor housed an open basketball court, which meant the building probably measured about 100 feet by 60 feet. The 2d Platoon's remaining two squads moved directly to the stairwell at the front of the building. It went down to the left and right and met again at a foyer on the second floor with a similar stairwell from the second floor to the first. Composed mainly of concrete interior and cinder block exterior walls, the building also had an open elevator shaft along its back wall. The two lower floors contained a maze of rooms, offices, and partitioned sections.

As 2d Platoon began clearing the second floor, it became apparent that the PDF had gathered on the first floor. The two squads methodically proceeded room-to-room using two-man buddy teams: One tossed in a grenade and the other followed the blast with a burst of rifle fire. A later inspection revealed the tremendous damage a fragmentation grenade can cause in an enclosed room. The metallic casing explodes into thousands of tiny fragments, which splinter virtually every inch of wall, ceiling, and floor. A single fragmentation grenade causes horrific damage to humans caught unprotected within its blast radius.

The impenetrable darkness and high noise level created pandemonium inside the PDF headquarters as two platoon-sized elements battled for survival. The pitch black conditions rendered night vision devices inoperable, and the building's cement-like composition made the explosions even louder. To add to the chaos, American and Panamanian soldiers screamed in both English and Spanish. No matter where they were that night at Coco Solo, most soldiers in Company C would attest that it was the loudest night they had ever experienced.

When a group of 2d Platoon soldiers approached the elevator shaft on the second floor, a PDF soldier below yelled for the Americans to surrender because he had a weapon. A private first class ran toward the voice, yelling obscenities. His partner bowled a grenade by his feet and down the shaft and pulled him out of the way. They heard only groans after the explosion.

The platoon prepared to move down to the first floor. In the heat of combat, with the confusion and the language barrier, compounded by the darkness and thick smoke, it was impossible for members of 2d Platoon to ascertain the intentions of the PDF on the floor below them. (After Operation *Just Cause* had ended, the PDF naval company commander asserted that he had wanted to surrender all along.) At that decisive moment, 2d Platoon stood poised to descend the

stairwell to meet the enemy—a potentially fatal encounter for one of the parties. The PDF commander felt he had better surrender his men now or face certain death. He inched his way toward the stairwell and called up his desires to surrender.

The platoon leader later recalled the overwhelming confusion at that juncture. He had finally found the enemy, but could only get to them by going down the stairs and meeting them face-to-face. This realization heightened the platoon's sense of trepidation and anxiety. The element had not sustained any casualties yet, and the attack had regained momentum after its inauspicious beginning with the fire on the third floor. Now that the soldiers were this close to the enemy, the platoon leader could not afford to make any mistakes, especially since he had already lost one squad to fire-fighting duties. His mind reduced the options to a simple calculation—either kill or be killed.

The bantering between his soldiers and the PDF below was clearly audible, but neither he nor his lead squad leader spoke Spanish. He asked a soldier who did speak Spanish if he could understand what the PDF were saying. The soldier replied that all he could make out was “something about weapons and surrender,” but was unsure whether the PDF were saying that they had weapons and wanted 2d Platoon to surrender, or were willing to surrender themselves.

In the enclosed environs of urban combat, it can be deadly for a force to bunch up inside a building. Fearing that potential catastrophe, and reluctant to lose the momentum of his assault, the platoon leader ordered the squad leader to continue down the stairwell. When the squad leader paused and stated his uncertainties about the enemy's intentions, the platoon leader persisted and screamed, “Kill him!” in reference to the anonymous voice downstairs. The squad leader complied by tossing a grenade down the stairwell. The platoon leader later remembered that his order brought home the stark reality of combat.

The PDF naval infantry company commander later reported that the grenade injured three of his soldiers. He felt the grenade had been thrown intentionally despite his efforts to surrender. As 2d Platoon narrowed the gap between forces, its Spanish-speaking soldier finally maneuvered close enough to be able to understand the PDF soldiers. The PDF commander had continued his attempts to surrender, adding that he never heard the initial surrender requests made over the loudspeaker in front of his headquarters. The grenade caused injuries among the PDF and expedited the surrender process. More importantly, in accomplishing the company's most difficult mission, 2d Platoon did not suffer a single casualty.

The platoon leader and his soldiers proceeded cautiously down to the first floor. With his translator at his side assisting him, he ordered the PDF soldiers to crawl past him on all fours. The platoon's soldiers bound the prisoners in temporary flex-cuffs and escorted them to a holding area on the school's tennis courts. The 2d Platoon had taken 15 prisoners out of the building by 0209 hours and completely cleared it by 0241 hours. The platoon found a fully locked and loaded .50 caliber machinegun on the bottom floor pointing

out the window at the support-by-fire position; fortunately, this weapon had remained unmanned during the attack.

From the blocking position in the Southern Housing Area, soldiers from the 3d Platoon fired at targets in their sector during the opening moments of the attack. One of my M60 machineguns blasted away from the windowsill on the floor above my doorway position. The gunner's expended links clanked to the floor. As two entire platoons joined fires with the Vulcan, all firing from the Southern Housing Area, the noise level rose to a deafening roar. The buildings we fired from shuddered. Within 60 seconds, I ordered my platoon to cease fire.

I was sure there were no more targets in our sector by that time, and I was concerned about the many civilians in our

The methodical clearing process by 2d Platoon ensured grenade explosions and bursts of rifle fire every few minutes for more than an hour, and at the time, of course, we did not know which side had been initiating these fires.

area. It was very tempting for the individual soldier to continue firing because so much firing was still going on all around us, especially the Vulcan barely 100 meters to our right. It seemed like a live-fire exercise in some respects—it felt awkward *not* to be firing when everyone else was. But with many civilians still working in factories to our front, I had to ensure that my soldiers fired only at legitimate targets. Once I was confident that there were no more valid targets within our sector, it became a matter of waiting for the other two platoons to accomplish their missions and stand by for further instructions from the commander.

Sometime around 0200 hours, my 2d Squad reported seeing sporadic sniper fire coming from the Lada car factory on our left flank. Merely minutes before the opening shots, the security guard in front of that building, luckily for his sake, had left his post to go inside. A 2d Squad team leader asked for permission to engage and fired an AT4 rocket at the suspected sniper position. Because of the oblique angle from which it was fired, however, the rocket glanced off the concrete building and exploded across the street. But the sniper fire did stop after that.

At this particular point in the battle, I intently listened on the radio command net to learn the situation within the other platoon sectors. The Chinese restaurant burned in brilliant flames and soon spread over to the PDF side of the building. By morning, the fire had completely consumed the entire right side of the structure and collapsed the roof above the PDF headquarters portion down into the third floor. As we watched the fire blaze on, we hoped for the safety of 2d Platoon inside the building and 1st Platoon on the other side of it. The methodical clearing process by 2d Platoon ensured grenade explosions and bursts of rifle fire every few minutes for more than an hour, and at the time, of course, we did not

know which side had been initiating these fires. As 0200 approached, we were quite surprised to continue hearing persistent gunfire so long after H-Hour. Resistance had been much stiffer than expected.

About 0330 hours, 3d Platoon soldiers heard voices coming from the V-shaped factory building across the street to our front. A Spanish-speaking U.S. soldier maneuvered his way across the open area, dashing from tree to tree to get close enough to speak to those in the factory. He traversed directly in front of the location where the sniper fire was spotted earlier. After several minutes, he coaxed 11 frightened men out of the factory. They had been on the night shift when the H-Hour attack surprised them. After the power went out, several bullets had hit their building, including the AT4 that had caromed from across the street. They had immediately dropped to the floor and lain there in silence and darkness for several hours. The 3d Platoon soldiers searched and questioned the men and then evacuated them to the company holding area.

The company commander denied 3d Platoon's request to clear the rest of that building and the Lada car factory before daylight. At about 0800, 2d Squad assumed the mission of clearing those two buildings. Inside the Lada compound, enclosed by a cyclone fence, 2d Squad captured three PDF soldiers trying to hide. They had donned civilian shirts over their uniforms. Although one had a pistol, they quickly surrendered and were taken to the holding facility for further questioning. One of the captives, aged and portly looking in the daylight, appeared harmless, if not pathetic, for a soldier. But before I could generate any sympathy for his predicament, I reminded myself that, despite his humble physical appearance, he could easily have ended the life of one of my soldiers.

Meanwhile on the dock, 1st Platoon's support element had cleared its objectives after a brief firefight. They first had to penetrate a cyclone fence around a small barracks. Once in, they tossed hand grenades into the barracks but found it

The AT section leader took a knee to aim, then fired. His rocket knocked over a mast on one of the boats, but the glare from the blast illuminated his exposed position, and PDF fire rained in on him from two different directions.

empty. A soldier rolled a grenade under a truck, killing the two PDF soldiers hiding there. Two more PDF soldiers died when grenades thrown into the boathouse ignited a butane gas explosion.

The major firefight at Coco Solo erupted closer to the boats with the assault element. This development somewhat surprised the company commander because he had not foreseen that many PDF soldiers would safely reach the boats. Prior reconnaissance indicated that there would only be about six enemy personnel at the boats. The warning at

H-26 and the telephonic warning to the PDF commander drastically altered the force ratio. Doctrine suggests that an attacking force must have at least a three-to-one advantage if it is to succeed. At this point, 1st Platoon attacked at almost even numbers.

Another soldier, a former Marine, led the 21-man assault element forward. The element came under fire almost as soon as it made the corner around the seawall. At first, the volume of fire sputtered, but gradually increased as the element moved closer to the boats. Initially, the leader of the group could make out only enemy muzzle flashes from his vantage point at the front of the assault element. As he crept closer to the objective, he could distinguish actual enemy personnel. Although the attack occurred in the dead of night and in the open expanse of a boatyard, no one in 1st Platoon used AN/PVS-7s to enhance night vision capability.

The assault element soon found itself pinned down as the PDF soldiers on the boats gained fire superiority. The 1st Platoon leader ordered the lead group to fire antitank rockets to reduce the incoming fires. The leader of the assault element moved forward with one of his team leaders. The company's antitank section leader also moved up with another soldier to form two two-man firing teams. One team would fire LAW rockets while the other would cover with machinegun fire. After firing the rockets, they would switch roles. The AT section leader took a knee to aim, then fired. His rocket knocked over a mast on one of the boats, but the glare from the blast illuminated his exposed position, and PDF fire rained in on him from two different directions. At the height of the barrage, some 20 enemy soldiers fired on 1st Platoon.

The hail of gunfire hit both members of the AT team. Bullets ripped through the wrist and ankle of one, and an AK47 round struck the other, injuring his knee, upper leg, and hip. The two received aid to stop the bleeding and prevent shock. The platoon medic arrived to the front of the column within minutes to continue treating the injuries. But both soldiers had to remain in place until 1st Platoon could gain fire superiority to get them out.

Most of the assault element remained behind the cover of one of the boats in dry dock. Only the platoon leader, his RTO, the M60 machinegunner, and the four men with antitank rockets had ventured forward toward the boats. Now two in this small group had been hit—and worse, enemy fire had them pinned down. The seven ducked for cover behind a large pile of scrap metal heaped on the dockyard's pavement. They had moved only about ten yards beyond the safety of the boat in dry dock. Some 500 rounds blazed in above and around them. They could hear the rounds crack in the air overhead and see the enemy's green tracers pass by and between them. Even from my location on the other side of the PDF building some 500 meters away, it looked like a giant green and red popcorn-maker as tracers streaked back and forth across the night sky. The clatter of bullets pelting off the scrap metal pile must have been terrifying to the small group using it for cover.

The PDF had the 1st Platoon assault element well outgunned; they now had clustered in two covered positions.

Seven lay pinned behind the scrap pile and the other 14 remained standing up behind the boat in dry dock. To exacerbate their difficulties, they had lost communications with the commander. When the RTO took cover, the antenna on his PRC-77 radio came loose. It took nearly 15 minutes to re-establish communications with the company commander, still at his original position on the other side of the Coco Solo complex in the Southern Housing Area. In the meantime, the platoon leader relayed his situation to the commander through the XO, located between the two. When the platoon leader reported that he had been pinned down and taken casualties, the commander decided to dispatch the Vulcan from the Northern Housing Area to a position that could support 1st Platoon's movement.

The platoon leader realized that to gain fire superiority, he had to get his men out of the PDF's converging fires. They had to spread out, and this meant leaving the safety of a covered and concealed position. The young enlisted soldiers sought guidance, "We can't move. What do we do?" Several of the sergeants, demonstrating inspirational leadership, took the initiative and began to move forward. This provided the spark to get the platoon moving again. After the antitank section soldiers went down, 1st Platoon's responsibilities increased. Not only did they have to secure their objective, they now also had to evacuate their wounded buddies. The stark reality of their situation had dawned on them: "They will kill us unless we kill them first."

The role of cohesion and loyalty in combat cannot be overestimated. All of the lower ranking enlisted men and many of the junior sergeants in Company C had been part of a COHORT system. They had all gone to basic training together and then to the same first unit as a cohesive package. They had been in the Army together since day one, lived together, and trained together, some for as long as six years. Now tested in combat together, they relied upon their strong bonds to each other and a deep collective spirit to survive. They would go above and beyond the call of duty to save one another.

Sometime during the engagement, which kept 1st Platoon pinned down until well after 0200 hours, the second Vulcan moved to a new support position behind the high school building onto high ground that provided a commanding view of the dock area. This Vulcan began to shower rounds upon the PDF firing from the boats. Because of the platoon leader's radio problems, the assault element leader also had poor communications with him when they were not next to each other. As the element leader pressed forward, he found it difficult to entice more soldiers to come with him into more exposed positions and into withering enemy fire. Nevertheless, he sustained the attack on his own initiative. He fired the four antitank rockets (AT4s) that soldiers passed up to him to provide suppressive fires and enable the rest of the element to move. His rockets connected with a couple of boats, and he saw two soldiers fall.

The Vulcan added several hundred more large-caliber rounds to the melee, which definitely helped to tilt the fire superiority toward to the U.S. forces. The 1st Platoon could clearly observe the Vulcan's tracers streaking by them. With

the advantage in firepower, the assault element began moving forward again in earnest. With the Vulcan's tracers nearly passing over the heads of the platoon, definitely well within danger close range, the XO personally ran over to the Vulcan and ordered the crew to stop firing. The two M60 machineguns at his position had also shifted their fires onto the boats. Both guns added about 300 rounds each in support of the platoon. The additional firepower had all but silenced resistance on the docks and allowed 1st Platoon to close onto its objective.

The heroic efforts of the assault element leader encouraged the rest of the men to fire and maneuver. He earned the

Once the platoon seized the first couple of boats to gain a foothold on the dock, the action ended quickly. The assault leader told a Spanish interpreter to inform the PDF they had 30 seconds to surrender.

Bronze Star for valor as a result of his actions that night on the dock. The injuries suffered by the other two men caused them both to be medically discharged from the Army. The platoon leader received a grazing wound in the leg by a bullet, but did not notice it that night.

In retrospect, it is possible that the company 60mm mortars could have been used to place suppressive fires on the boats. Although the brigade commander retained the authority to allow indirect fires, the company commander could have employed mortars if 1st Platoon had been in grave danger. The mortar section sergeant expressed confidence that he could have safely hit the boats using the handheld, direct fire mode. The leader of the assault element also believed that 60mm mortar fire would have effectively suppressed the enemy fire coming from the boats. But the company commander and the platoon leader both felt that 1st Platoon had been too exposed in the open area to employ them safely. If absolutely necessary, the commander had planned for the platoon leader to adjust-in the rounds by first over-shooting into the bay, then gradually dropping the distance onto the targets.

Nevertheless, the assault element worked its way out of the temporary crisis. The combined firepower of the Vulcan and the support element provided the suppressive fire 1st Platoon needed to gain the upper hand. Once the platoon seized the first couple of boats to gain a foothold on the dock, the action ended quickly. The assault leader told a Spanish interpreter to inform the PDF they had 30 seconds to surrender. To the relief of 1st Platoon, 12 PDF soldiers came out and surrendered. The 1st Platoon took several hours to find and capture the remaining enemy soldiers who were attempting to hide in the water and in the vehicles of the nearby car factory. It took the longest time to thoroughly clear each of the boats. After the battle, 1st Platoon discovered that it had been opposed by about 25 enemy soldiers,

about four times as many as it had been told to expect.

While 1st Platoon was engaged on the dockyard, one of the Swift boats and one of the Vosper patrol craft escaped out into the bay. In the darkness and confusion, it was difficult to determine which boats, if any, had managed to escape. The first report of boat movement came at 0139 hours. This initial report confirmed that one boat had definitely made it out into the water, and possibly two. At 0146 hours, observers spotted two boats 200 meters to the east of the Colon monument. At 0341 hours, an AC-130 gunship neutralized one of the boats. No boats escaped north out of the Manzanillo Bay. Company C had completely secured Coco Solo by 0415 hours.

After the individual platoons secured their objectives, the company began to consolidate and reorganize. The trauma life support team attached to the company ensured that the wounded received immediate medical treatment. An aerial medevac, requested at 0312 hours, arrived at Coco Solo at 0402 hours. In addition to the two soldiers in Company C wounded by gunshots, two soldiers from the attached 82d Airborne platoon suffered backblast burns while firing anti-tank rockets from the prone position.

Although no one took an official "body count" of enemy soldiers at Coco Solo, rough estimates would account for about 15 total casualties—about 10 killed and five wounded—and perhaps a dozen or more killed on the two boats that made it out into the water. Despite the proximity of civilians living and working in the area, none were injured. The entire chain of command had emphasized that if civilians became casualties, "we might win the battle, but we would lose the war." Company C captured at least 30 enemy soldiers and detained 65 civilians that first night at Coco Solo. All civilians were released at noon the next day.

Many factors contributed to Company C's success at Coco Solo. The battalion intelligence officer emphasized the PDF's deficiencies. The naval infantry company commander had assumed command only a few days before the battle and did not have a thorough understanding of the forces arrayed against him or of U.S. firepower capabilities. This paucity in knowledge and his inability to know previous U.S. troop movement schedules probably contributed to Company C's ability to gain surprise in the attack. Although this was the first time in combat for every soldier in the unit, what they lacked in experience, they made up for in other areas. The battalion commander attributed the company's success to rehearsals, discipline, and good junior leadership. The company commander echoed these observations and pinpointed leadership, teamwork, and soldier training and

fire discipline as the keys to success.

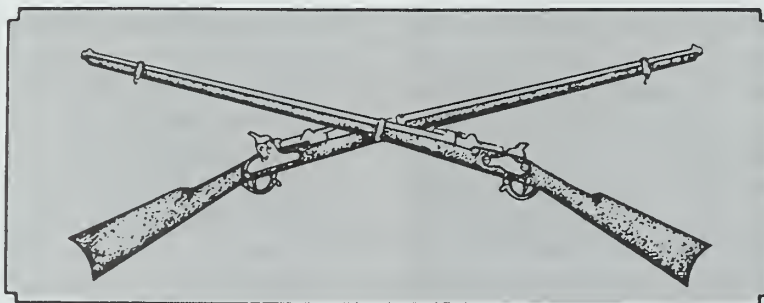
Students of the military art can glean valuable insights from Company C's experience at Coco Solo. Paramount is the close parallel between combat and realistic training, which must be reinforced by detailed rehearsals. In stark contrast, the quality of training received by our World War II predecessors pales in comparison to that which today's soldiers receive. A platoon leader noted afterward that "everything you do in combat is taught in the officer's basic courses." With the numerous pre-deployment live-fire exercises, the squads and platoons had confidence in their ability to fire and maneuver with live ammunition.

Although the PDF had some very lethal weapon systems, they did not take advantage of their own firepower capabilities. In fact, during the battle, most of their heavy machine-guns remained in storage and were never mounted. The PDF soldiers were poorly trained, poorly led, and poorly motivated—a recipe for disaster.

Self-discipline is imperative in combat operations. On the modern battlefield, soldiers can expect to fight in close proximity to civilians. The United States will demand minimizing civilian casualties, fratricide among friendly forces, and collateral damage to personal property. To achieve these results, every soldier must understand and uphold the rules of engagement and the laws of warfare. Urban combat requires that soldiers exercise firepower restraint. Company C's soldiers exhibited tremendous fire discipline during many delicate situations, fraught with ambiguity, high risk, and uncertain outcomes.

Finally, a crucial factor in combat is leadership. Both inside the PDF headquarters building and outside on the dock, two forces of relatively equal size squared off. In both cases, the PDF wilted under mounting pressure. To emerge victorious, the two U.S. platoon leaders first had to overcome adversity. Leadership at all levels, from team leader through company commander, enabled the company to accomplish its mission. The company's experience at Coco Solo was merely a microcosm of *Just Cause's* overall complexity. The battle exemplified modern combat in the dynamic, technologically advanced environment of today's world.

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TRAINING NOTES



“On the Staff” Success Through Teamwork

LIEUTENANT COLONEL RICHARD D. HOOKER, JR

Not long ago I served as a staff officer in an infantry battalion. Although I wasn't the best staff officer in the Army, I learned many lessons that may be useful to you—the infantry officer facing your first staff assignment. You have a big job ahead of you, one that is important to the Army, your battalion, and the troops you'll support. Although you may have little choice of your new assignment, how well you perform is all up to you. Make sure you prep your battlefield to make the most of what lies ahead.

The First Week

You'll probably start your tour of duty by meeting with the battalion commander. Hopefully, you've reviewed the unit's mission and your new boss's command philosophy before you meet. This is a good time to listen and take notes, paying careful attention to his priorities and his assessment of where your new section is strong and where it needs work. Note the colonel's views on officership in general, and staff officership in particular. They're based on many years of experience in different jobs. Avoid discussing your future aspirations; there will be time for that later. Your performance in your new job will determine your future in

the battalion, anyway. Focus on being a great staff officer first, and the rest will take care of itself.

Your next office call will be with the battalion executive officer. The XO is as critical to your success as anyone else in the battalion—the commander included. As the “chief of staff,” he will personally supervise you, and his views of your performance are important. His specific mandate is to monitor your section closely and ensure that its efforts are integrated with those of the rest of the staff. All good XOs want a

The XO is as critical to your success as anyone else in the battalion—the commander included.

smooth, well-functioning staff operation that supports the commander and the troops. That's a big job. Help him do it by doing *your* job well, so he doesn't have to.

In most infantry battalions, the S-3 is usually a major. If your S-3 is a captain, do not assume he is your peer. He isn't. He is there because he was a superb commander who has earned the colonel's trust and confidence as a member of the inner circle. Treat him

as the senior leader he is. If he is a major, be aware that even in the best battalions there is a dynamic tension between the field grades. Because abilities, experiences, and personalities differ, the duties and responsibilities of the XO and the S-3 may overlap or diverge from what doctrine suggests. The key point to remember is never to attempt to play one off the other. It's unprofessional, it hurts the battalion, and it will be noticed. If you receive conflicting guidance, advise your rater, and execute his guidance. Make sure you inform and consult with your supervisor before seeking an audience with the battalion commander on any issue. You owe him that professional courtesy, and he will know when an issue needs to be elevated and when it doesn't.

During your first week the command sergeant major will likely stop by with a cup of coffee to say hello (and to size you up). If not, you should seek him out. If he is like most, he will make it a point to mentor young staff officers, and you should listen carefully to his counsel. He will wear several hats: He is the commander's trusted agent and principal adviser. He is the head of an elite fraternity, the senior NCOs in the battalion, upon whom the unit's success

depends. And he is a special staff officer in his own right, often with specific responsibilities assigned by the commander. Make him an ally. You'll be glad you did.

The next order of business is to meet your NCO in charge. Unlike you, he will probably be an MOS-trained specialist who has built a career in his particular staff specialty. Now is the right time to make sure that you both share the same number one priority—taking care of soldiers. Directly or indirectly, all staff sections exist to support the troops. A good way to sound out your new right-hand man is to ask about the unit's most recent command inspection. If he can quote the results in his area by heart, he's probably on top of things. (If not, beware: he may not be as knowledgeable and informed as you would like.) State up front that you intend to work through him, not around him; that you will welcome his input on all aspects of your soldiers' individual performance, on and off duty. As a team, you can contribute a great deal to the success of the battalion. You both bear a heavy responsibility. Make sure you live up to it.

Once you've met these key personnel, you'll want to meet your troops. Most staff sections are a mixed bag, with some standout performers and others who are there because, for one reason or another, they were not measuring up in the line units. Do not be the staff officer who always complains that you're not getting the very best. The very best belong in the line, where they can fight. Keep an open mind. In time, you will find that some of your new troops have found a special niche and have skills that enable them to make major contributions in their area. Others will be outstanding performers no matter where they are assigned. A few may be on their last stop before leaving the Army. But all deserve the same standard of leading and caring. Later, as a commander, you'll be coping with many more people and many more challenges. Use this opportunity to hone your troop leading skills in preparation for bigger things.

There are a few basic rules for all soldiers serving on the staff that you

should remember and enforce. First, never forget that you are combat soldiers, too. Your standards of physical fitness, weapon proficiency, combat discipline, and fieldcraft must be the same as your peers in the rifle companies. Your common task skills must be up to standard. You must dig your own positions, conduct your own patrols, and man your own observation posts. Never fall into the trap of thinking there is one standard for the "line doggies" and another for you. They are there to carry the fight to the enemy—not to take care of you—and your job is to deal with any threats in your area and continue to do the job they are counting on you to do.

Your common task skills must be up to standard. You must dig your own positions, conduct your own patrols, and man your own observation posts.

In the same vein, be aware that the soldiers you support are extremely sensitive to perceived differences in living and working conditions. Your working hours should be the same as theirs. Your living conditions in the field should match theirs. Your troops should receive the same treatment when it comes to awards, promotions, and schools as those in the line units—no more, no less. You will find it that much harder to succeed if you allow a "we/they" perception to take root.

Meeting Your Peers

Let's be frank: As a staff officer, you'll sometimes feel a little bit like a second-class citizen. Although a valued member of the team, you are not part of that special circle who wear green tabs. The company commanders belong to a select group whose chief is the battalion commander. As an aspiring commander yourself, always be aware that the company commanders are different from you. They wield the power of decision, while you, as staff officer, can only advise and recommend. Your duties and your performance are impor-

tant, and often critical, to the success or failure of the battalion. But you cannot succeed without respecting their prerogatives and the heavy responsibilities they carry.

In your first days as a staff officer, it's a good idea to meet privately with each commander on his turf. Introduce yourself, fill him in on your background and assure him that you are there to help him and his subordinates do their jobs. Ask for his views about your new staff section—how it performs, its strengths and weaknesses, how it can improve. Assure him that you will never send bad news about his unit up the chain of command without a heads up, and tactfully let him know that you expect the same courtesy. Managing your relationships with the commanders must be a high priority, and helping them do their jobs must be your personal concern.

The headquarters company commander deserves special mention. His is a tough job. He must be a commander and a staff officer at the same time. His unit is much larger and more complex than the line units. His troops are not completely his own since their loyalties are split between their company and their respective staff sections. His training and administrative requirements will sometimes conflict with yours. Try hard to look at matters from his point of view, and don't allow friction to develop. Compromise is almost always possible if you both work at it. The more you help each other, the better your battalion will be.

Forging strong relationships with the company commanders is important, but keep in mind that meeting the battalion commander's needs comes first. You get paid to make sure all of your units meet established standards in your area, and to keep the commander informed. In this regard, you are clothed with his authority and, within your area, empowered to carry out necessary actions in his name. Use that power judiciously and with common sense. If a unit is slipping, you should be among the first to know. Inform the company commander, help him with the resources to fix the problem, and follow up. Don't wait until the next command and staff

meeting to surface the issue where it would embarrass the commander. You are all on the same team, working together to care for the troops and stay combat ready. Just remember—one day you'll be a commander too.

I found the first few weeks in a new staff job confusing, and you may too. As infantry officers, we like to think we are trained and destined to lead troops in combat, not to be personnel or logistics experts. Nevertheless, you'll be expected to learn your new job thoroughly and *quickly*. No excuse will be acceptable if you don't rapidly gain mastery of your new job. Break out the applicable regulations, field manuals, and technical manuals. Visit your counterparts in sister battalions. Get to know your counterparts at brigade and division. Study unit SOPs and command inspection reports. Drop in on the units frequently and get to know the XO's and commodity chiefs. In short, throw yourself into your new job with all the enthusiasm you can muster, and get a handle on things in the first few weeks. It's not rocket science—and there's no time to lose!

Principles of Good Staff Work

What makes a good staff officer? To start with, it's not a question of personality. The ideal staff officer is not quiet, scholarly, and meticulous any more than the ideal commander is outgoing, dynamic, and action-oriented. Good staff officers, like good commanders, come in many flavors—but all share some things in common.

The first rule is *know your job*. With the possible exception of your NCOIC, no one in the battalion should know your area better than you do. The commanders are generalists by necessity, but you must be the expert in your field. Establish a reputation as the “go-to” guy when things must happen. You are the first stop when people need help in unfamiliar territory. They are depending on you. Make sure they can.

Next you must *train your people*. The daily demands of running your section and supporting the troops will make this harder than you think. Carve out time to train, and prepare your training thoroughly, just as you did as a

platoon leader. If your troops are competent at their current grade, help them prepare for duties at the next—a deep bench is a great asset. Then cross-train them to build versatility and flexibility into your section. A word of caution, though: Even when training, remain available for soldiers who need assistance and need it now. Remember the prime directive: Take care of the soldiers.

Good staff officers are *proactive*. A wise old colonel once told me, “Don't ask for guidance unless you really want some!” Look ahead, anticipate events and requirements, and take positive control of your area while keeping the chain of command informed. Be alert

The ideal staff officer is not quiet, scholarly, and meticulous any more than the ideal commander is outgoing, dynamic, and action-oriented.

for opportunities to help the battalion perform better. Be the kind of staff officer who needs an occasional spot-check, not constant over-supervision. Lean forward in the foxhole!

A key rule of the road is to *stay in your lane*. Your fellow staff officers and the company commanders will appreciate your active support, but not your active involvement in their business. Sometimes there are gray areas, but not often. Learning your job and running a first-rate staff section will keep you busy. Avoid the temptation to stray off course. If you do, the results can be unpleasant, and your effectiveness—and credibility—may suffer. Understand the big picture, but watch *your lane*.

The essence of good staff work can be summed up in two words: *Follow up*. We've all seen staff officers who produce blizzards of memos, full of good ideas, but are too lazy to follow through. Patience and persistence are key qualities you must have to succeed. Your commander wants systems in place that enable the battalion to execute routine functions to a high standard. The staff provides the forcing function to build strong systems and

make excellence routine. As the eyes and ears of the commander, you must get down to the companies frequently to coach and monitor your counterparts. Discipline yourself to follow up. It's the only way to be the best you can be.

To be a first-rate staff officer *don't miss suspenses*. This is so fundamental it should be obvious, yet many units are plagued by chronically late suspenses. Right out of the gate, establish and enforce the principles of meeting suspenses on time. Do not allow your subordinates, or the company XO's, to be cavalier about your requirements for information or action. Keep the suspense file and take action early, before suspenses start to slip. There will be times when a late suspense can't be helped, but these should be rare. Make it a point of honor to get your stuff in on time. Because timeliness matters in combat, it matters all the time.

All good staff officers *communicate effectively*. Too many officers are poor writers and briefers. Fortunately, effort and practice can produce rapid improvement. Strive to write clearly and directly in the active voice, using short, concise sentences. Avoid grammatical errors and misspelled words—they show poor preparation and inattention to detail. Rehearse your briefings and keep them crisp and to the point. The commander's time is valuable, so don't waste it. Honing your written and oral communication skills is a key part of your professional development. Without them, you won't go far.

In any job in an infantry battalion, the best performers *work hard, work fast, and work well*. The staff is no exception. As a field grade officer, I saw many young staff officers burning the midnight oil, but I was more impressed with the ones who worked intensely and well. There's a difference. A well-organized, decisive staff officer knows his business and gets it done. He understands the second- and third-order effects of his actions and the commander's intent. In the field, you've got to produce a quality product, and you've got to do it fast. Time waits for no one in combat.

Next you must *learn to delegate*. That same wise old colonel also taught

me: "Never do anything you can get someone else to do." He wasn't talking about being lazy. He meant that you can't do everything yourself—the tasks you *can't* delegate will keep you busy enough. Once you've trained your section, assign them tasks, then stand back and let them spread their wings. Spot-check and monitor, with due allowance for the mistakes of the young and eager. Let your NCOIC manage daily operations and run the section while you concentrate on quality control, long-range planning, and personal interaction with the green-tabbers. Don't be a micro-manager; power down.

Lastly, learn to *do the important things first*. On a typical day, dozens of issues will compete for your time and attention. Sorting out the important from the trivial is a big part of your job. Prioritizing your missions, assigning responsibilities, and providing resources to get the important jobs done first is

your job. No one else can do it for you. If you're not sure which missions come first, seek guidance from your boss. Soon you'll be able to sort out the "must do now" issues from the "delegate" or "this can wait" piles.

In sharing my reminiscences of the staff, I haven't discussed the core values of officership because they apply all the time, everywhere: Let your word be your bond. Be a team player. Support the chain of command. Set the example. Know your job. Put the troops first. Focus on warfighting. When Robert E. Lee said that "duty is the sublimest word in the English language," he meant that doing your duty encompasses all the values that define our profession of arms. Those are words to live by.

These, then, are the lessons I remember as a staff officer. I hope they will serve you as well as they have me. There is a theory that you can be a good

commander or a good staff officer, but not both. Don't buy it. Great leadership and great staff skills complement and reinforce each other to make great infantry officers. At the end of the day, you'll treasure this time as great training for command and a great opportunity to learn and grow.

Follow me!

Lieutenant Colonel Richard D. Hooker, Jr., commands 2d Battalion, 505th Infantry, 82d Airborne Division, now in the Sinai. He previously served as Special Assistant to the Chairman, Joint Chiefs of Staff, and as deputy commander of the 3d Battalion, 325th Airborne Battalion Combat Team in Italy. He is a 1981 graduate of the United States Military Academy and holds a doctorate from the University of Virginia. He has written numerous articles for professional military journals and is editor and co-author of *Maneuver Warfare: An Anthology* (Presidio Press, 1994). His second book, *By Their Deeds Alone: Battle Studies for the 21st Century*, is expected to be published soon.

The Art of Land Navigation

GPS Has Not Made Planning Obsolete

LIEUTENANT COLONEL RAYMOND MILLEN

Conventional land navigation—that is, with map, compass, and terrain association—has never been a strong suit of junior leaders, and it has suffered even more as a result of the global positioning system (GPS) devices now available. The general attitude is that these devices have made such training unnecessary. Another factor in ignoring a detailed land navigation training plan is the difficulty. Few junior leaders can produce a good plan, because they do not have the skills and experience. And few units develop written planning procedures to help them, thereby placing the burden on the commander. Often, even experienced commanders do not have the acquired skills and, even if

they do, they need to devote most of their time to the tactical plan. As a result, units are likely to throw a hasty route plan together and hope for the best instead of addressing the task with confidence. It is no wonder that many junior leaders think that simply finding the objective is a sign of mission success.

It is essential that units develop standing operating procedures for land navigation planning. An SOP provides much more than just an orientation aid. It allows the commander to focus on planning the mission; it addresses the effects of terrain, vegetation, and the soldier's load on the rate of movement—providing an appreciation of

time and space; and it allows the commander to remain focused on the tactical situation during movement. Reaping these benefits does not require an enormous expenditure of time, labor, or resources, once the system is in place.

The commander delegates the planning task to a platoon leader (hereafter called the chief navigator) during the warning order and gives him general guidance on the route, time constraints, and soldier's load. Using the *Land Navigation Planning Checklist* and the *Land Navigation Worksheet*, the chief navigator develops the detailed plan. For clarity, he makes a *Route Overlay* or sketch and backbriefs the commander when he is finished or has an issue to be

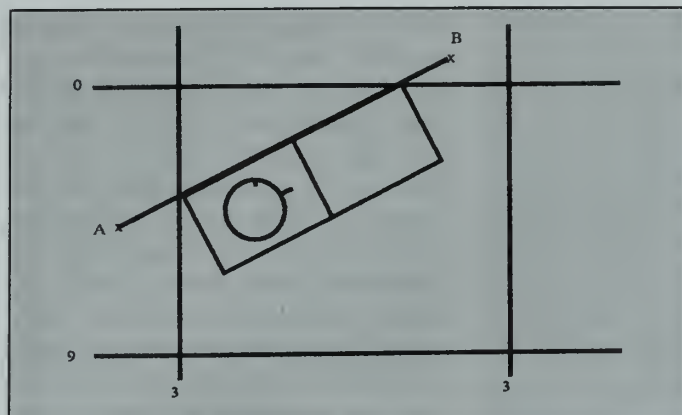


Figure 1. Northern Azimuth

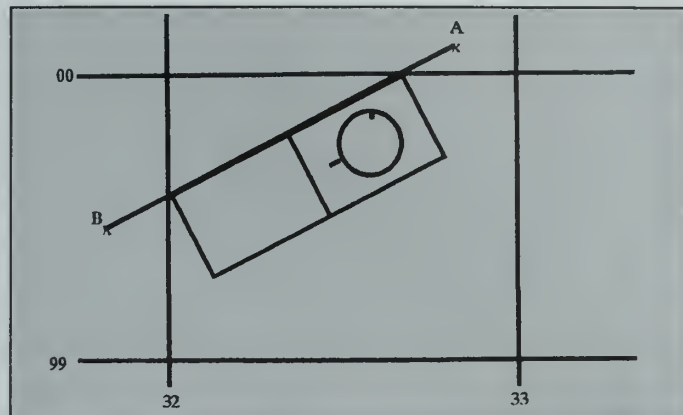


Figure 2. Southern Azimuth

resolved. Once the commander approves the plan, all radiotelephone operators (section, platoon, company, and attachments) copy the land navigation overlay or sketch for their respective leaders. The first sergeant provides quality control during this phase. The chief navigator briefs the plan during the operations order (OPORD), using either a sand table or an enlarged route sketch.

Referring to the map and the *Land Navigation Planning* checklist, the chief navigator develops the route using a systematic approach. Using a straight-edge and an alcohol pen or pencil, he draws out the complete route. The route consists of a series of smaller segments called legs. Unless the objective is nearby, the route may consist of numerous legs. The planner uses the worksheet to help him calculate the rate of march of each leg and the total time expended in the movement. This information is then transferred to the route overlay or sketch. (TTP: The planner should have a land navigation kit to assist him in planning: Hand calculator, magnifying glass, pipe cleaners, military protractor or clear ruler, laminated map scale index, and laminated copies of field expedient direction determination techniques.)

A common mistake is to plan a route with only one or two long legs, hoping that one azimuth and straight-line distance will make up for the difficulties in terrain. Unless the terrain is unusually gentle, straight-line routes expend considerable time and exhaust soldiers. Once committed to this inflexible plan, leaders are reluctant to deviate from the

azimuth, even if the terrain or tactical situation may warrant it, for fear that deviations will lead to inaccuracies and increase the odds of getting lost. This forces the unit to move over compartmentalized terrain and numerous hills, wade through swamps and streams, and claw through scrub brush and wait-a-minute vines just to stay on course. The greatest fear then is how enemy contact will disrupt the land navigation effort instead of how the unit will react to it. In effect, the commander is captive to an impractical and inflexible method of navigation.

Collecting features—such as a stream, road, woodline, or lake—can be used to mark the distance of each leg between two distinct and recognizable start and end points (also called waypoints). When traversing featureless terrain, legs are demarcated by time, rate, and distance. Each leg portrays the

magnetic azimuth (not the grid azimuth), the distance, and the estimated consumption of time. Since pace-count inaccuracies increase over long distances, the planner attempts to limit legs to 1,000 meters or less, particularly in rough terrain. A new leg doesn't necessarily mean a new azimuth. It is simply a way of verifying the unit's location and starting a new pace count. The start and end points are signals for the unit to pause and verify its progress along the route. Most important, this progress is disseminated throughout the unit for everyone to know. That way, if elements should be separated from the company, the new leader will have an idea of his present location and proceed from there.

Terrain *handrails* also help develop the route. A handrail is a terrain feature parallel to the direction of movement, such as a ridge, stream, road, railroad embankment, power lines, or woodline. As the name implies, a handrail guides the unit along its route with assurance.

If the *collecting* feature at the end of a leg is a distinct point, such as a road intersection, the navigator should deliberately offset 10 degrees to the left or right of the point. Each degree of offset results in a deviation of 18 meters to the left or right of a point at 1,000 meters. Having deliberately offset from the point, the navigator can move straight to the point (left or right) at the end of the leg to maintain course accuracy. Since intersections are likely to draw the enemy's attention, it is better to send a reconnaissance team to verify the point's location and tell the navigator how far the unit is from it.

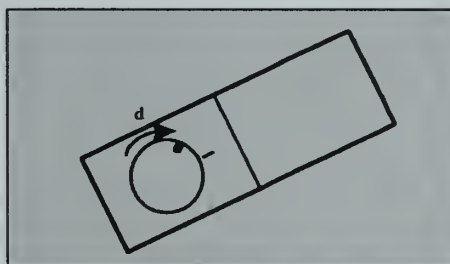


Figure 3. Eastern Declination

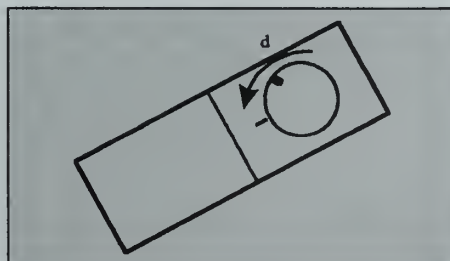


Figure 4. Western Declination

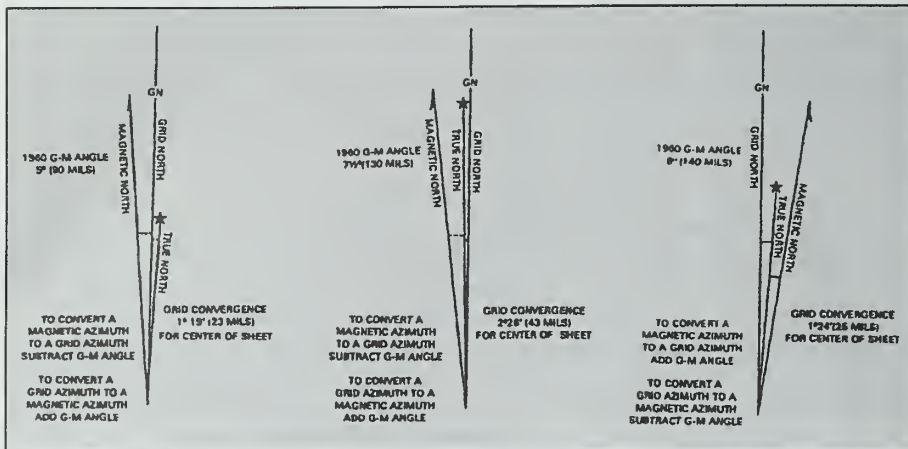


Figure 5

Another navigational aid is a *catching* feature—a clearly identified terrain feature that tells the unit it has moved too far along a leg. The selection of terrain features to delineate each leg is particularly important for night navigation. The navigator cannot rely on the recognition of distant terrain features (ridge lines, mountains, hills, woods) since he has less depth perception at night, causing these features to blend together. A patch of woods could look like a hill or a ridgeline. Trees that line a stream can completely disguise its existence in the dark. In this sense, triangulation is rarely possible at night. Verification requires that someone physically check out the feature.

Determining azimuth between two points. To determine the azimuth between two points on a map, the planner can use either a protractor or a lensatic (military) compass. The protractor is excellent in a classroom, but tends to be a little unwieldy in the field. It also provides only the grid azimuth, forcing the planner to use scratch paper to convert to the magnetic azimuth, and the planner is hard-pressed if he loses it. In this regard, learning to use the compass is not only easier for use in the field but also faster for converting from grid to magnetic azimuth. The method with a compass is shown in Figures 1 and 2:

- Place a ruler, or draw a line, between the two points directly on the map.
- Place the graduated straight edge of the compass parallel to the line, with the front of the compass pointing in the direction of travel.

- Determine the grid azimuth. Rotate the bezel ring so that the short luminous line is parallel to the north-south grid lines on the map and is pointing toward grid north. (Each click on the bezel ring represents three degrees. This is useful to know when changing azimuths at night.) Rotate the compass until the luminous line is aligned with the north-seeking arrow. The reading on the compass (fixed black index line) is the grid azimuth. (For civilian compasses, align the bezel ring interior lines parallel to the north-south grid lines of the map with the arrow marker—not the needle—pointing toward grid north.)

- Determine the magnetic azimuth, also called “accounting for declination” (Figure 5). Somewhere on each map is a declination symbol, normally displaying three arrows. The line with the star symbol at its tip represents true north. We are concerned with only two of these. The line with the letters “GN” at the tip is grid north, and is parallel to the north-south grid lines. Next, locate the magnetic north line; it is a solid arrow cut in half with the letter “M” at the tip. This line is either left (west) of or right (east) of the grid north line. The angle between the grid and magnetic lines is the declination. Keeping the compass on the line of travel, rotate the bezel ring toward magnetic north (left is counterclockwise, right is clockwise) the number of degrees between the grid north and the magnetic north lines. Align the short luminous line with the north-seeking arrow and read the azimuth from the fixed black index line; this reading is the magnetic azimuth.

- For precise declination calculations, the planner can make a declination diagram for conversion calculations. The first step is to draw the grid north and magnetic lines on a scratch pad, referring to the declination diagram on the map. Next, draw a reference line to the right of the grid north line and perpendicular to it. Now, draw an arc between the grid and magnetic north lines and insert the number of degrees separating the two (as shown on the map)—this is the declination angle. Continue by drawing an arc between the grid and reference lines and inserting the grid azimuth—this is the grid azimuth angle. The angle between the magnetic and reference lines is the magnetic azimuth. To obtain this, add or subtract the declination angle from the grid azimuth angle. For example, an eastern declination (one with the magnetic north line to the right of the grid north line), the magnetic azimuth is the grid azimuth angle, minus the declination angle. For a western declination, the magnetic azimuth is the grid azimuth angle *plus* the declination angle. Naturally, this method is used to convert from magnetic to grid azimuth as well.

Calculating time and distance. Four factors influence the rate of movement of dismounted infantry: climatic conditions (weather, percent of illumination), vegetation, terrain, and the soldier’s load. Accurate assessments of the effects of these factors are a product of both experience and experimentation.

Climatic conditions are very difficult to quantify, and they vary so much that their effect on the rate of march will depend on both the area of operations and the condition of the soldiers conducting operations. It may be enough to understand that in deep snow, thick mud, or heavy rain that results in slick ground, the company will get there when it gets there. The amount of illumination also slows the rate of advance, but with enough night training—and realistic expectations of the leaders—soldiers can maintain a rate that is in line with the night movement-planning.

Like weather and climate, determining the effect of vegetation on the rate

of movement is a virtual unknown until a unit moves through similar vegetation. Although some data is available regarding the effect of vegetation on the rate of movement, the unit will probably need to develop its own empirical data. Generally, a unit should avoid heavy vegetation. Although this may increase the total distance traveled, it may still result in a faster rate of movement. Night movement in heavy forests and jungle is so difficult that it is often better to wait until daylight.

The effect of the terrain is the most prevalent and crucial factor in land navigation. Fortunately, civilian orienteering has at least provided numerous methods of calculating the effect changes in elevation have on route planning, a major consideration.

- **Horizontal Distance**—For flat terrain, simply measure the distance along a leg using a protractor or laminated map scale. Add 20 percent to the straight-line distance to account for

slight course deviations and minor elevation changes. To determine distances along a road, trail, or stream, use a pipe cleaner with annotated map scale tick marks. Trim the pipe cleaner to conform to the road, and put a tick mark on the map to indicate the distance covered. To account for error, add 10 percent to the total distance measured. Use a pipe cleaner for movements along the same contour interval (moving around hills or along ridges, for example).

- **Elevation Conversion**—When the route is over elevated terrain, the planner must account for the effect the slope will have on the rate of march as follows:

- Verify the contour interval from the map information. Using a magnifying glass, count the number of contour lines that the leg crosses. Subtract the lowest contour from the highest contour level to get the change in elevation, or vertical distance.

- Using the general rule of 10:1,

convert the change in elevation to the horizontal equivalent. For purposes of determining the rate of march, this means that each meter of rise or fall is equal to 10 meters of flat distance. This figure is called the *elevation conversion*. (Note 1: Because the 10:1 rule already accounts for course deviations, the planner does not add the 20 percent deviation factor. Note 2: This is not the actual distance the unit must traverse for pace count purposes. For the pace count, the planner should use the Pythagorean Theorem ($a^2 + b^2 = c^2$) where *a* is the horizontal distance, *b* is the vertical distance, and *c* is the slope distance.)

- **Combined Distance**—The *elevation conversion* is added to the *horizontal distance* to get the *combined distance*. For example, the horizontal distance between the bottom and the top of a hill is 1,000 meters + 2,000 meters = 3,000 meters.

- **Time Expenditure**—The general

LAND NAVIGATION PLANNING CHECKLIST

1. Receive initial guidance from commander during warning order regarding the route:

- a. General primary and alternate routes with cover and concealment.
- b. Times for SP, occupation of ORP, and time of attack.
- c. Soldier's load—maximum weight.

2. Plan tentative primary and alternate routes using map recon:

- a. Designate the legs of the route.
 - The start- and endpoints (way-points) of each leg are demarcated by collecting features (clearly defined and recognizable terrain features as an aid to navigation).
 - Distinct changes in elevation (slopes) are also designated as legs.
 - Navigational handrails (terrain features that run parallel to the leg) such as streams, ridges, or roads, are used as a navigational aid whenever possible.
 - When handrails are not available, plot the leg endpoint to a collecting feature, such as a road or stream intersection, deliberately aiming off (about 10 degrees) to the left or right of the point.
- b. Determine the magnetic azimuth of each leg:
 - Using a protractor or a compass directly on the map, determine grid azimuth.
 - Convert grid azimuth to magnetic azimuth on each leg.
- c. Determine the distance in meters for each leg:
 - Using the scale on the protractor

or the map, measure the horizontal distance of each leg. Add 20% to distance measured to account for minor deviations and changes in elevation.

- For road or trail movement, use pipe cleaner to measure distance traveled. Add 10% to distance to account for error.

- Determine the change in elevation by subtracting the lowest contour line from the highest contour line of each leg.

- Using the 10:1 rule, convert change in elevation into horizontal distance equivalent for time calculation (for example, 100 meters change in elevation equals 1 kilometer of level ground), called Elevation Conversion. Do not add 20% to the horizontal distance.

d. Estimate travel time per leg:

- Rate of March

<u>Rate of March</u>	<u>Day</u> <u>(kph)</u>	<u>Night</u> <u>(kph)</u>
Road	4.0	3.2
Cross Country	2.4	1.6
Trail	3.0	2.2
Deciduous Forest	0.5	
Tropical Rain Forest	1.0	
Secondary Jungle	0.1-0.5	
Tall Grass	0.5	
Swamps	0.1-0.3	
Rice Paddies (Wet)	0.8	
Rice Paddies (Dry)	2.0	
Plantations	2.0	

- Time Expenditure = (Horizontal + Elevation Conversion Distances) ÷ Rate of March.

- **Soldier's Load Factor**: Subtract 2km for every 6 hours of movement for each 10 lbs load over 40 lbs (e.g., a 70-lb load results in a loss of 6 kms over 6 hours marched from the total planning distance).

e. Calculate Closure Time.

- Calculate length of column. (Lgthcolm) = number of soldiers x table factor + total column gaps between units. Table Factor: Single column (5m/man) = 5.4; (2m/man) = 2.4.

- Closure Time = length of column ÷ rate of march.

- f. Identify a catching feature (clearly defined and recognizable terrain feature) to alert the unit that it has gone too far on a leg (use if no catching feature exists for a leg).

- g. Identify an attack point within 1 km of the ORP on or near recognizable terrain feature to serve as linkup point for company recon or as a point for precision navigation to ORP.

3. Backbrief commander:

- a. Provide him with the Route Worksheet and Route Overlay.

- b. Upon approval of the route, add rally points (RPs).

- c. Coordinate with FIST for TRPs along the route to include RPs.

4. Prepare route briefing for OPORD:

- a. Company, platoon, and section RTOs report to platoon CP to copy route overlay.

- b. Platoon RTO (and assistants) prepare route sand table if required.

TRAINING NOTES

planning rate of march on a road is four kilometers per hour (kph) during the day and 3.2 kph at night. For flat, open terrain it is 2.4 kph during the day and 1.6 at night. The rate of march factors in a 10-minute break for every hour on the march. Even if such rest halts are not planned, the planner should allow this time to account for unscheduled halts (navigation check, security halt, etc.). Using the time-rate formula, calculate *time = combined distance* divided by *rate of march*. Continuing with the above example, the night cross-country time expenditure over a distance of 1,000 meters with a rise of 200 meters is 3 km divided by 1.6 kph = 1.9 hours. The land navigation planner can use this calculation to determine whether it is faster to negotiate elevated terrain or bypass it. He must bear in mind that the physical burden on soldiers favors bypassing such obstacles whenever possible.

A factor often overlooked is the amount of time it takes for the unit to completely close on the objective rally point (ORP). Most movements are conducted in one-column formation, especially at night. The commander must tell the planner how many soldiers will be involved in the movement so he

can calculate the length of the column. The table factor accounts for the interval between soldiers. The total of column gaps accounts for the gaps (usually 50 meters at night) between the advance guard and between the distinct company elements. Usually, because of the darkness and the difficulty of the terrain, the only gap will be between the advance guard and the main body.

- **Soldier's load**—As a final step, the planner calculates the effect of the soldier's load on the rate of march. The soldier's load should never exceed 70 pounds, with 35 pounds being the ideal. Obviously, the lighter the load, the easier it is to maintain a predictable rate of march. For every 10 pounds over a 40-pound load, the planner subtracts two kilometers from the total distance covered in six hours. The planner can show this on the sketch by drawing a blue phase line at the six-hour point and a red line at the appropriate subtracted distance to show the effect the load will have on the movement. This precludes the need for yet another calculation in the plan.

Time Schedule. Starting with the line of departure (LD) time, each leg's time expenditure is applied to real time. In this manner the commander can track

the progress, alerting the navigator early if the unit falls behind schedule and giving him time to make adjustments. Lastly, the schedule accounts for ORP occupation time. The unit should occupy the ORP at least two hours prior to the attack time to account for the leader's recon completion of the plan, and the movement into final positions. If the schedule reveals that the unit cannot complete its movement on schedule, the chief navigator backbriefs the commander immediately and offers recommendations that will get the unit there on time.

Route Overlay. Deciding whether to use an overlay or a sketch depends on the scale of the map and the distance to be covered. Generally, map overlays require very small writing and tend to be too busy. A sketch more easily shows all the necessary information, is easier to brief, and is much easier to understand. A sketch should have, as a minimum, grid lines and grid coordinates beside each waypoint. The sketch portrays each leg with the magnetic azimuth, actual distance, and time expenditure. It also depicts the terrain delimitations of each leg, rails, and limit of advances. The land navigation planner's platoon sergeant supervises the

LAND NAVIGATION WORKSHEET

Leg #	CP/Grid	CP Description	Azimuth	Horizontal Distance (+20%)*	Change in Elevation	Elevation Conversion (10:1)	Combined Distance HD+EC	Time Expenditure T=CD/Rate	Time Schedule SP: 1900 hrs	Remarks
1	m/123456	LD	47°	960m	—	—	960m	36 min	1936 hrs	Rate = 1.6 kph
2	k/123456	Stream	47°	360m	—	—	360m	14 min	1950 hrs	
3	a/123456	Ridge bottom	88°	1320m	—	—	1320m	50 min	2030 hrs	
4	s/123456	Stream	354°	450m	+40m	400m	850m	32 min	2102 hrs	Contour interval = 20m
5	g/123456	Ridge bottom	354°	400m	+100m	1000m	1400m	53 min	2155 hrs	
6	b/123456	Trail	354°	350m	-80m	800m	1150m	43 min	2238 hrs	
7	z/123456	Ridge bottom	354°	600m	-20m	200m	800m	30 min	2308 hrs	
8	f/123456	Highway 1	336°	960m	—	—	960m	30 min	2338 hrs	
9	c/123456	Hill	306°	1500m	—	—	1500m	56 min	0034 hrs	
10	e/123456	River bend	260°	420m	—	—	420m	16 min	0050 hrs	Linkup point
	ORP								0115 hrs	Closure Time: 25 min.
									0500	Attack
TOTAL				7320M				5.6 hrs		

*Note: Do not add 20% course deviation for legs traversing elevated terrain; the 10:1 rule already factors it in. Add 10% to distance measured on a road movement to account for measurement error of pipe cleaner method.

RTO's reproduction of the master overlay in time for the OPORD.

End Result of the Plan. Besides reducing the probability of getting lost, the land navigation plan provides the commander with the estimated duration of movement, which gives him an excellent insight into time and space considerations. With this information, the commander has an idea of how much time he has for the leaders' recon or mission contingencies. It also gives junior leaders an appreciation of such matters, which will help them when they become staff officers or NCOs. The company commander provides this feedback to the battalion commander, the XO, and the S-3 immediately, because it affects the synchronization of the plan. Armed with such figures, the company commander can assist the S-3 in planning for the company to cross the LD at 2100 hours, cover the necessary distance in mountainous terrain, and attack an objective at 0600.

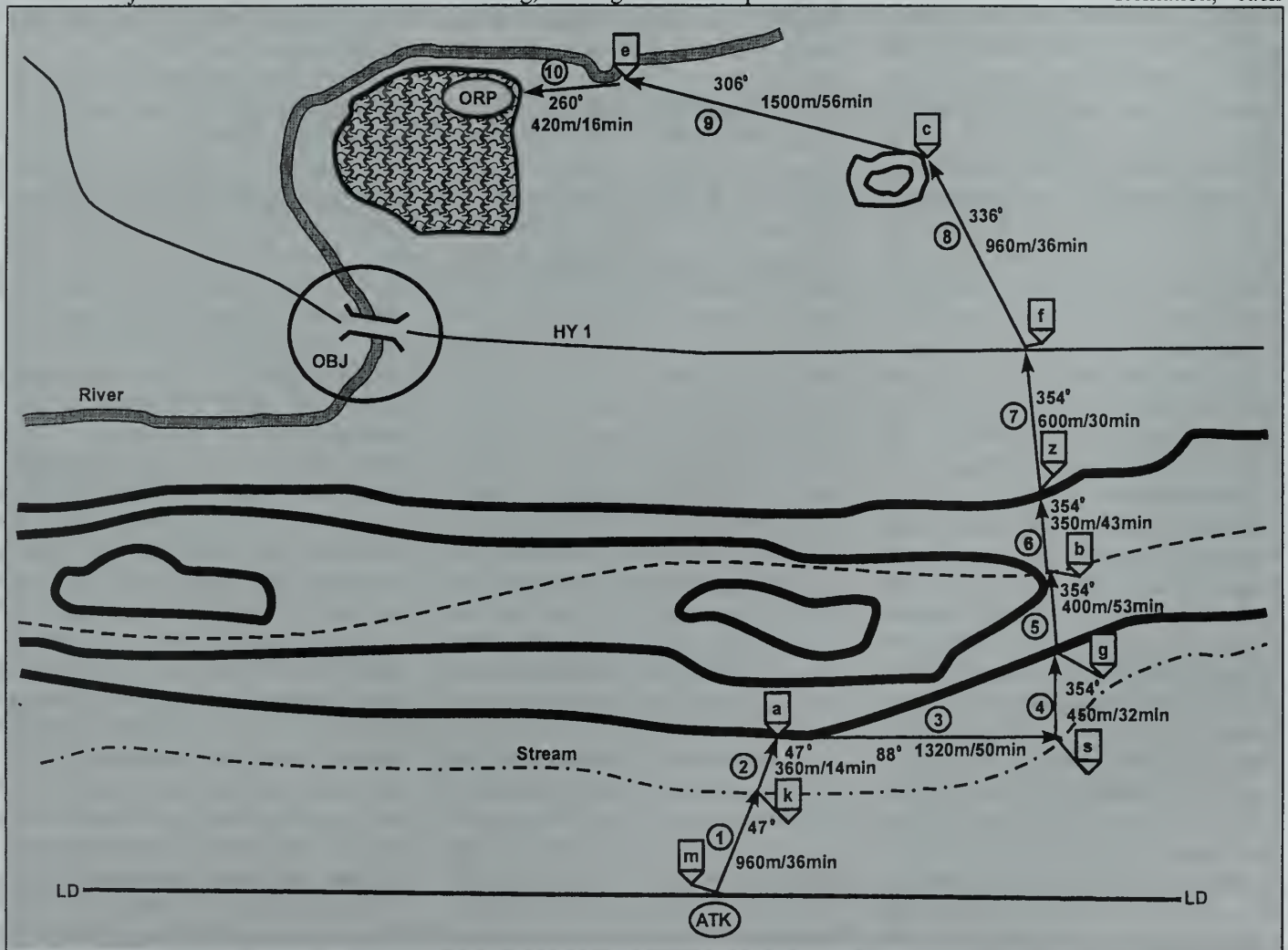
Junior leaders should regard these planning figures as a starting point. As part of the after-action review process, the commander tasks the land navigation planners with tracking and recording the actual expenditure of time for each leg. This will eventually yield a planning data base for march rates over various types of terrain, in differing conditions, and under different loads. Tedious and time-consuming? Yes. But it provides the company with precise figures for estimating the amount of time required to reach an objective. Once the database is complete, the hard part is over—except for the walking and climbing.

The same discipline applies to mechanized or motorized movement. The disadvantage in a mechanized movement is that tracked and wheeled vehicles normally cannot move along a straight azimuth. They must go around obstacles from point A to point B of each leg, making it more important to

use pipe cleaners to determine distances on the map. In comparison with other mechanical measuring devices, the pipe cleaner is probably more accurate and easier to manipulate. The good news is that elevations and vehicle loads are hardly limiting factors, but weather affects mechanized and motorized movements more so than dismounted movements. Thus, the mechanized unit also needs to maintain a log of actual movements.

Movement

During movement, everyone is responsible for land navigation. The commander emphasizes it at the OPORD, and each subordinate leader echoes this philosophy during his OPORD. Although the soldiers do not have maps and compasses, leaders need to disseminate the route plan to them and keep them informed of the unit's location throughout the movement. Armed with such information, each



soldier will be better prepared to carry on with the mission if he should be separated from the main body or if his leaders should become casualties.

During movement, the commander focuses his attention on the tactical situation and the mission instead of keeping his eyes on map and compass. His immediate thoughts should be on the unit's tactical disposition (use of cover and concealment, movement technique), reaction to enemy contact, and time schedule. As with the captain of a ship, he checks the unit's location through his tasked navigator, stops the unit whenever it loses its track or has navigation feedback conflicts, and takes action (map check, scouting party) to get the unit back on track. Good land navigation rests primarily on a good navigation plan.

Pace Count. Pace count is best calculated over a long course with varying terrain. Once a soldier has determined his pace, he should memorize it or write it on a laminated card and place it in his cap or helmet. In elevated and rough terrain, a normal pace count becomes inaccurate and requires a modified count. Repeated training and experience are the best ways to determine an accurate pace count in all types of terrain. Each soldier should note how the various terrain, weather, and light conditions affect his pace count and record it on his pace-count card. As with time expenditure calculations, making a record of modified pace counts helps the unit move with more confidence. Leaders must identify those soldiers who have a knack for accurate pace counts and use their talent.

During movement, the lead platoon reports the start and end point of each leg, referring to GPS if it is available. Each leader verifies the navigational assessment and concurs or offers recommendations. The commander makes the final decision regarding navigational questions as the time and the tactical situation require. To provide backup for the navigator, the lead platoon leader focuses on reading the route. He is located next to his main compass man and pace man for continuous consultation. He keeps his thumb on the route marked on the map to help him track

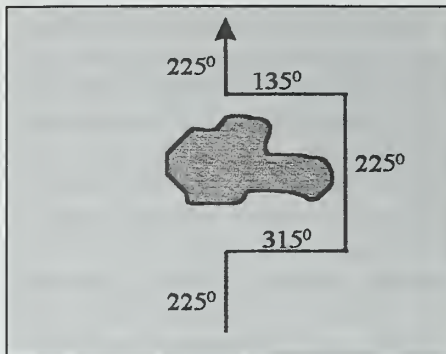


Figure 6. Box Method

rapidly. The compassman focuses up ahead on landmarks (or steering marks) to keep the unit moving on the right azimuth. The platoon leader reads the map on the move, checking it frequently to maintain terrain association. At night, this means he must use his red-filtered flashlight frequently, even if using it violates light discipline. If he keeps the flashlight close to the map, the amount of light escaping is very small (penlights are the most effective). The platoon leader focuses on remembering as many of the map details as possible and on reading the terrain ahead looking for features that will verify the unit's location. He also maintains a broad field of vision, constantly looking to the sides and rear to gain an appreciation of the terrain around him. He uses GPS only as the final verification of his location. Since land navigation skills are perishable, the unit must not rely solely on one piece of equipment for navigation; when it is not functioning or when the stock of batteries is depleted, the unit must still be able to continue the mission. When serving in this capacity, the lead platoon leader is not paying much attention to the tactical side of the operation. The platoon sergeant assumes this role and advises him when the tactical situation does not merit moving through certain terrain. At this point, the platoon leader must recommend an alternate route to the commander.

When obstacles block the route, the lead platoon leader reports the type of obstacle (swamp, water, clear-cut) to the commander and bypasses it. The accepted way to do this is to use the box method: Take the azimuth and add or subtract 90 degrees and move on this

new azimuth until the obstacle is no longer in the path; move another distance along the original azimuth; then subtract or add 90 degrees to get back on the original course (Figure 6). For minor obstacles, the unit can use the zigzag method: Add or subtract 60 degrees, move a certain distance, then subtract or add 60 degrees, and move the same distance to get back on the original route (forming equilateral triangles along the route). This technique is also useful when negotiating steep slopes.

The company always navigates to an attack point within one kilometer of the ORP. The attack point is located on or near an easily recognizable and unique terrain feature. The company can use this as a linkup point with its scouts, who can occupy and mark it to ease the linkup. Even if it is not used for a linkup, it makes an excellent point from which a quartering party can easily locate and prepare the ORP for occupation. In this manner, the unit can smoothly occupy the ORP.

Getting back on course. Despite all this planning, the unit may get off its planned route as a result of enemy contact, bypassing an obstacle, unrecognizable terrain features, or navigational errors—assuming that GPS is not available. The worst course of action is to continue wandering around hoping to stumble on a recognizable terrain feature. The commander halts the company and calls his platoon and section leaders and their navigators to the command post for consultation. Together, they attempt to pinpoint their position, referring to the last identified terrain feature the unit passed. If light conditions are favorable and some clearly identifiable terrain features are in view, the leaders can use the intersection or resection method to determine the unit's location. After discussing the points at which the unit may have strayed, the commander dispatches patrols to verify the unit location. The commander informs the patrols of the unit's possible location and what terrain features—or, depending on the detail of the map, benchmarks, religious shrines, or natural features—to look for. He always has one patrol retrace the unit's

steps to the last verified position in an attempt to see where the company got off track. Finally, he gives all patrols a return time (15 to 30 minutes) to keep them from trekking about for hours.

If unsuccessful, the commander can request an artillery or mortar spotting or illumination round on or over a checkpoint, target reference point, or the objective. If all else fails, a more dangerous method is to have higher headquarters contact an electronic warfare unit to triangulate the company position from its radio transmissions.

Using natural lines of drift. Lines of drift are ridgelines, spurs, streams, and valleys—anything that makes movement easier. The enemy recognizes these natural features too and is likely to focus his reconnaissance effort along them, particularly around the objective area. If following a ridge, the actual route should be between the crest and the valley floor. Animal trails are fast tracks and generally too numerous for the enemy to cover. The enemy's

assets are limited, particularly on the defense, so he is forced to focus his efforts on choke points and lines of drift. If the company is forced to use an avenue along a line of drift, the commander should determine how far to use it, dispatch an advance guard far enough ahead to prevent the main body from becoming engaged if the advance card makes contact.

Although the number of steps and calculations may seem daunting, land navigation is not as difficult as the planner might imagine, once he has performed the procedure a couple of times. Delegating land navigation planning to a capable, experienced subordinate ensures that this crucial aspect of the operation receives the attention it deserves, even when time is short. Now the commander can give full attention to the tactical plan. Preparing a land navigation plan gives subordinates a better appreciation of the influence of climatic conditions, vegetation, terrain, and the soldier's load on time and

space. This knowledge will reduce the delay associated with movements and will also serve the leaders well when they do their staff time later in their careers. Finally, the commander can focus his attention on the tactical situation during movement, knowing that subordinate leaders are tracking land navigation properly. This approach to an age-old problem not only adds predictability to mission planning, but also instills confidence and pride in every soldier and enables the unit to get to its objective with minimal delay and with its combat power intact.

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Organization and Training For Mechanized Rifle Squads in Restrictive Terrain

CAPTAIN GREGORY L. JOACHIM

Mechanized rifle squads that must operate in restrictive terrain will perform better if they are specifically organized and trained for that environment. I offer here some techniques that have been used to prepare for the "de-file fight" on terrain found in such places as Korea and southern Europe, but which may be encountered anywhere in the world.

The organization of the Bradley infantry platoon has been the focus of some debate for the past few years. The addition of the M4 carbine, the M240B medium machinegun, and the Javelin antitank weapon have greatly increased the lethality and flexibility of the rifle

squads. The organization of these squads as depicted in Field Manual (FM) 7-7J, *The Mechanized Infantry Platoon and Squad* (Bradley), does not address the changes in weapons and doctrine that have been introduced since the manual's publication. The Infantry School is a proponent of the organization of two rifle squads and a five-member support element (2x9+5) per platoon. Although the concept is sound, the lack of resourcing, especially in personnel, keeps most units from fully exercising it.

One way to make the most of the flexibility and firepower of the platoon's dismounted soldiers in severely

constrained units is the 1x9+5 (Figure 1), developed by the 2d Battalion, 9th Infantry, in Korea. This organization of the dismount section was developed to support the mission essential task list (METL) and use the new weapons to their maximum potential. The following are some of the considerations during the development of this organization:

- There are normally 12 to 15 riflemen per platoon in the unit, not the 23 required.
- The M4 carbine should be used as a shock weapon in the trenches and in urban terrain.
- The M240B provides firepower on

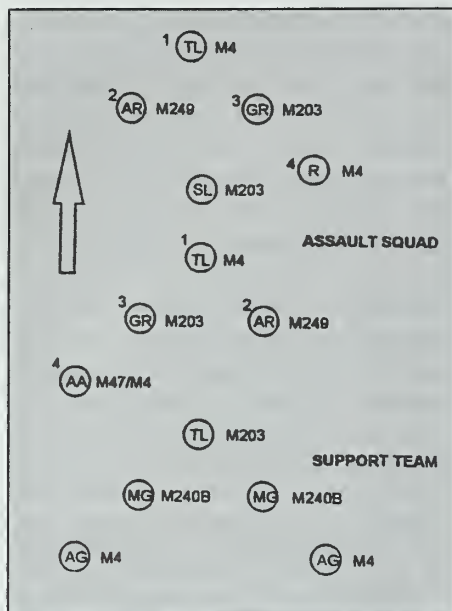


Figure 1

targets that Bradley fighting vehicles (BFVs) cannot service (which may be numerous in restrictive terrain).

- Selected leaders need to carry M203s for signaling and placing ground-burst illumination for use as target reference points (TRPs).

With these considerations in mind and basic infantry doctrine as a start point, the 2d Battalion, 9th Infantry, developed the structure shown in Figure 1. The nine-man assault squad is similar to the light infantry squad organization. The team leaders and riflemen carry M4 carbines for maximum maneuverability and accuracy in trench clearing and military operations on urban terrain (MOUT). The squad leader carries an M203 for signaling and directing the fires of the support team or the mounted section. The M249 light machineguns remain in the assault squad to provide local suppression or secure the top of the trench line as the team progresses. The rifleman (#4 man) has the primary responsibility for engaging targets with squad antitank weapons, depending on the mission.

The support team consists of two M240B machinegun teams and a team leader (sometimes a staff sergeant) with an M203. If two staff sergeants are assigned (as the basis for the two rifle squads) but an insufficient number of riflemen are present, the support team leader should be a staff sergeant. The

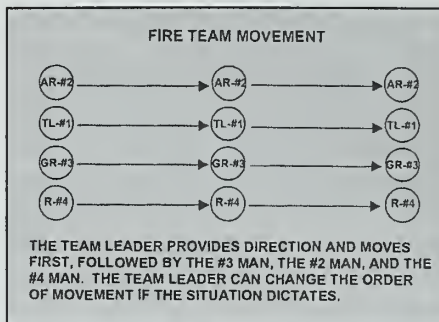


Figure 2

primary missions of the support team are to suppress the enemy on an objective to allow the assault team to move into position, and to suppress the enemy antitank gunners to allow the Bradleys to move through highly restrictive terrain such as rock-drops or ford sites. With the increase in firepower, rifle squads are better able to secure enemy dismounted avenues of approach. Once again, the element leader has an M203 for signaling and placing ground-burst illumination for use as TRPs. The primary job of the support team leader is to focus, distribute, and shift the fire of the two machineguns to best utilize their high rate of fire.

This type of organization enables the unit to integrate new soldiers into the

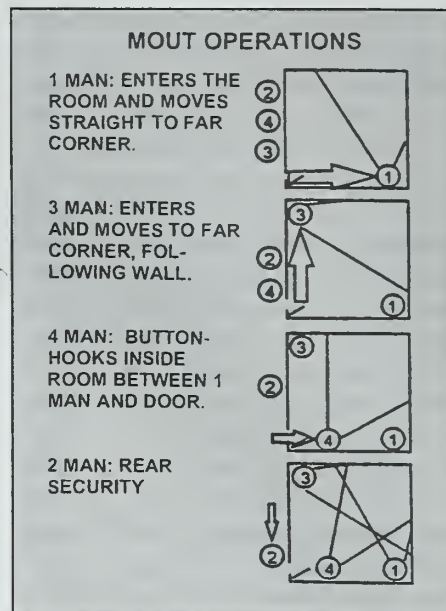


Figure 3

platoon quickly. Once a new soldier arrives and is given his position in the squad (#2 man SAW gunner in A Team), he immediately knows his position in MOUT, movement, trench clearing, and standardized drills (Figures 2 and 3). In the standing operating procedure (SOP) for bounding by buddy team, the team leader (#1 man) moves first and provides direction to his team.

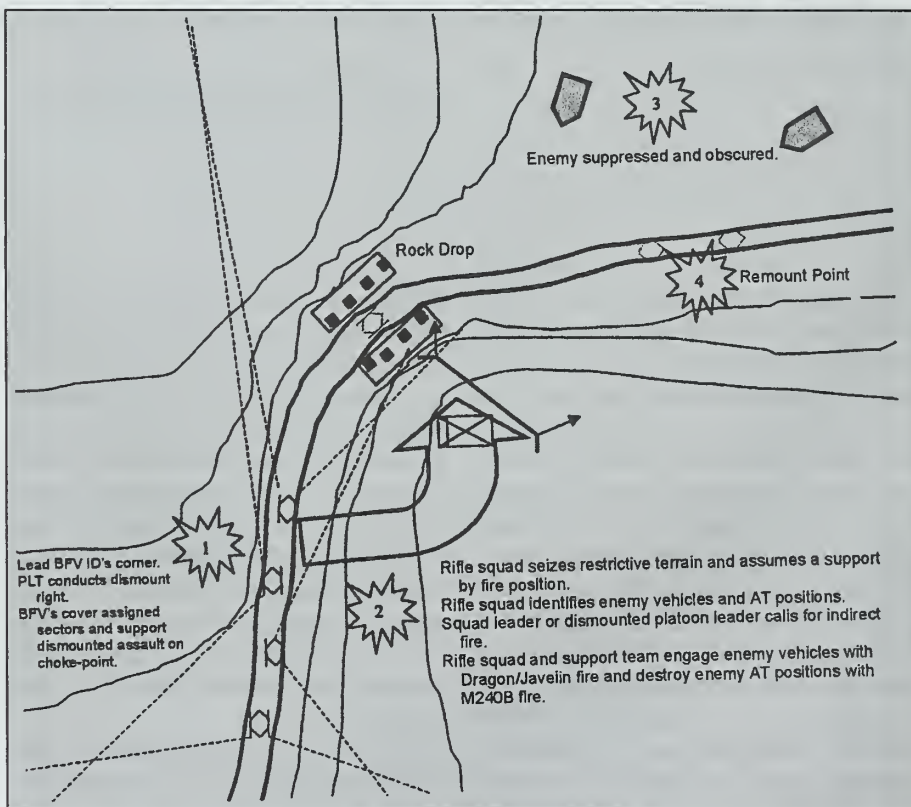


Figure 4

A standardized numbering system also allows for the movement of soldiers within the platoon and company without loss of continuity. This becomes especially important in units with a high turnover rate, such as the 2d Infantry Division or any other deployed infantry unit where there is an influx of soldiers from various units who are accustomed to different SOPs.

The training for dismounted squads must be carefully structured to prepare for the unique type of terrain on which they will fight. This training can be grouped into specialty skills, lethality, and collective training. Whenever possible, the training is conducted with the BFVs to increase the integration of mounted and dismounted elements.

The specialty skill training consists of the expertise that BFV rifle squads will need to fight in restrictive terrain. These skills include demolitions, combat lifesaver, and physical fitness. The most important of these is demolitions training. Due to the terrain, the BFVs are often forced to stay on the roads for extended distances, and something as simple as a mine or as complex as a rock-drop can bring the unit to a halt. The dismounted soldiers must have the training to deal with a variety of different types of charges and methods of breaching. From satchel charges to line charges to "ear muff" charges for concrete blocks, the dismounts must be able to assess, prepare, and execute numerous demolition tasks. Scheduling a demolitions range before a collective training cycle, then integrating breaching into the training is one way to keep the soldiers proficient in this highly perishable skill.

In mountainous terrain with little space for helicopter landing zones, more combat lifesavers are needed to sustain the casualties until ground evacuation is possible. If the unit is attacking up a single road through a defile, the traffic is moving in only one direction—forward—and it takes more time to get the casualty to the rear and more trained combat lifesavers to sustain life. If possible, every rifle squad member should become a combat lifesaver.

The battlefield also demands that

soldiers be physically fit, and battle focused physical training must be stressed to prepare them for exhausting movements in mountainous terrain. March-and-shoot exercises can help increase effectiveness. This training not only provides good physical training for the soldiers but also increases their marksmanship skills under stress. PT in combat gear, litter runs, and platoon competitions are other examples of challenging physical training.

Lethality training consists of weapons qualification and technique training. Weapons qualification is a continuing

Weapons qualification is a continuing process that keeps the soldiers proficient on their assigned weapons and serves as a baseline for more complex training.

process that keeps the soldiers proficient on their assigned weapons and serves as a baseline for more complex training. Common deficiencies include failure to conduct nuclear, biological, chemical (NBC) firing tasks and failure to zero AN/PVS-4 night vision equipment before firing the M249, M240B, and M60 under conditions of darkness. In addition to assigned weapons, selected soldiers also need to qualify on the hand grenade, AT4, M47, and M24 sniper. The technique training builds on qualification and increases a soldier's expertise and accuracy under varied conditions. Reflexive firing Tables I through IV (Familiarization, Advanced Familiarization, Qualification, and Target Discrimination) greatly increase the skills of soldiers who carry the M4 or M16. This training includes carry technique, stance, aim, shot placement, and trigger manipulation. After a soldier completes reflexive firing, he knows the natural point of aim for his weapon and can quickly engage and kill targets at close range during assaults and in trenches and buildings. M240B or M60 lethality training includes live-fire crew drills from elevated and undulating terrain under day and night conditions. Company snipers can increase their

lethality by practicing stress shooting and engaging moving targets in day and night scenarios.

Collective training for the dismounts is the culmination of all the preliminary weapons training and qualification, specialty skill training, and low level collective training conducted during sergeant's time. During the weekly sergeant's time training, the squads rehearse SOPs so they maximize training time by eliminating the initial (crawl) phase of training on the range. The dismounted gunner tables in FM 23-1 provide a good base for planning and executing collective training. Once the unit has conducted individual, buddy-team, team, and squad live fire exercises and the mounted crews are qualified on Bradley Table VIII, more complex and terrain-specific operations are possible. These operations include some platoon drills that are not covered in FM 7-7J Drill. Clearing around a corner is a specific drill that a Bradley platoon must master if it is to be successful in the "defile fight" (Figure 4). This drill consists of the platoon identifying the curve, dismounting, the dismounts advancing into the direction of the curve, eliminating any enemy anti-tank gunners overwatching the feature, suppressing enemy vehicles with Dragon or Javelin and indirect fire, then handing off targets to the BFVs as they turn the corner. Assaulting a rock-drop, clearing a ford site, and approaching a defile are other tasks units can train on before conducting operations in restrictive terrain.

These techniques are meant to supplement the current Army doctrine. The organization presented is a possible solution to the variety of challenges that are to be expected in operations through restrictive terrain. It worked well in the 2d Battalion, 9th Infantry, and it is worthy of consideration by other units as well.

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Mortar Short-Range Training Rounds

Cost Effective, but Misunderstood

CAPTAIN GARY D. JONES

There has always been a need for a realistic mortar training cartridge that will let units train economically while saving on service ammunition. The Army began using sabot sub-caliber training rounds in the 1970s and 1980s. The M1 sabot was used with the 81mm mortar, and the M3 sabot with the 60mm mortar. Both cartridges were inaccurate, had high misfire and dud rates, and caused excessive carbon build-up in the cannon. These drawbacks did not help the mortar platoon experience realistic training, but these deficiencies are things of the past.

In contrast, today's short-range training rounds (SRTRs) are highly accurate, have low misfire and dud rates, and cause no more carbon build-up than regular service ammunition. An 81mm short-range cartridge was evaluated by the Army and type classified in 1986 as the M880 SRTR. A similar round, the M766 SRTR, was developed for the 60mm mortar and released in 1998.

In order to conduct successful training with the SRTR, leaders must know the correct steps in the preparation process:

- Set up training.
- Coordinate with range control to select a designated location.
- Build a scaled firing range (permanent, semi-permanent, or temporary).
- Set up a range to support the scenario for 1:10 scale.

The SRTR makes it possible for soldiers to train more frequently and at less cost. Yet current usage rates are ex-

tremely low, approximately 25 to 35 percent of the number authorized. Understanding the history, capabilities, characteristics, advantages, and disadvantages of the SRTR will help leaders in the planning and execution of mortar training.

The following are some of the advantages of using the SRTR:

It is effective for training all elements of the indirect fire team. The

It is designed to be fired, recovered, refurbished, and re-fired. A mortar section uses the same procedures it uses with service ammunition. The 81mm SRTR has a range of 47 to 458 meters, and the 60mm SRTR, 56 to 538 meters, depending on charge and elevation data from the firing tables.

The M880 SRTR comes ready to fire, packed in an 8-round wooden, wire-bound box. It is designed to be fired and recovered a minimum of ten times, and with good care and maintenance, many rounds have been fired more than ten times. (This round, when first issued, costs \$52.00, and a refurbishment kit costs \$16.00, a substantial saving over conventional ammunition. One round of 800 series high-explosive ammunition costs \$218.00. A 100-round practice fire for an ARTEP using conventional ammunition costs \$21,800.

Using the M880, the cost of 100 firings would be \$1,908, which amounts to a saving of more than 90 percent.)

The M766 SRTR is issued in a 16-round case, ready to fire. Each round can be re-used and re-fired up to 24 times by refurbishing with the kit. (Each complete round costs about \$64.00, and each refurbishment kit costs about \$15.00.)

It provides opportunities to prepare soldiers and units for combat. This training enables the unit commander to observe the actions of the indirect fire team and the tasks it performs. He is then better able to evaluate the proficiency of all elements of the



forward observer (FO) can watch the round throughout its flight. On impact, it gives a flash, an audible bang, and a smoke signature, with no fragmentation. This signature allows all supporting elements to spot rounds, make adjustments, and process the needed information. The fire direction center (FDC) computes data received from the FO; the gunner places the data obtained from the FDC on the mortar; and the assistant gunner drops a round down the barrel. The entire indirect fire team functions the same as it would firing service ammunition, with one exception—the FO observes the round's impact on a 1:10 scaled range.

training, identify and isolate problems, and begin corrective training.

It can be fired in training areas where service ammunition is not allowed. This saves time by eliminating long-distance travel to standard mortar ranges and also saves on vehicle maintenance and fuel costs.

It uses the entire indirect fire team. These rounds simulate actual service ammunition, and the team uses the same procedures. Each member of the team can view the overall operation, which helps him understand the roles of the other members during training. Also, the mortar platoon uses all of the organic equipment required when it fires service ammunition, which reinforces the procedures used in combat.

It is recovered intact, leaving no fragments. Since the M880 and M766 do not explode, they have no adverse effect on the environment. These rounds eliminate the problem of unexploded ordnance disposal, as sometimes occurs with conventional ammunition. Because the SRTR does not pose a threat to the environment, it can be fired almost anywhere. When it is time to dispose of a spent round, the steel body and aluminum tail fin can be recycled.

Given all of these advantages, why are usage rates so low? Most of the problems result from a general misunderstanding of the training round itself, but the following are some of the other contributing factors:

Leader misconceptions of the SRTR. Senior leaders are not well-informed of the advantages of the SRTR and what it can do for them in a training environment. During the fielding of the rounds, many unit leaders were not present for training, and hence did not become aware of the training advantage the SRTR offers. This is a primary reason why units do not train with the SRTR.

Time lost when firing the SRTR. The time it takes to prepare, operate, maintain, and recover rounds does reduce training time. To ensure that platoons make the most of their training opportunities, leaders must accomplish several tasks. They must have a training scenario that complements the brigade's long-range training plan. In their plan-

ning, leaders must also refine training and follow up on the availability of ranges and ammunition to meet training requirements.

Training restrictions on firing ranges. When all of the rounds have been fired, training must stop until the rounds can be recovered and readied for use again. The range is closed and the soldiers are organized in teams to go down-range to start the recovery phase. To maximize use of training time, a designated recovery team within the platoon should rehearse the recovery and refurbishment process in advance. A platoon SOP on the procedures should include a spotter to locate the point of impact, how long the recovery team should continue to look for rounds that have not been found, and prior training for soldiers on the SRTR.

Adverse weather and surface conditions. These conditions make it harder to find rounds on the ground. Range maintenance—clearing brush, mowing grass, filling in puddles—is a must when firing the SRTR. Commanders must realize that adverse weather conditions will influence the effectiveness of training as well as safety. And leaders can expect that more time will be required to complete the training mission. Extra equipment is also needed—a refurbishing table, water, rags, and brushes. To make it

easier for the soldiers to refurbish the rounds in a reasonable time, the unit should have a vehicle assigned for the recovery task, and bleachers with overhead cover to protect the soldiers and the cleaning equipment.

Unit missions and time constraints. Because of the Army's worldwide missions, mortar platoons have limited live-fire and training time, and soldiers would rather fire allocated service ammunition than the SRTR. The time and effort required to coordinate or design an SRTR range with range control personnel sometimes weighs heavily against its use. Units need to plan ahead with range control on occupying the range, and it is best to have all the equipment and teams assigned before arriving at the range site.

Variations in range control procedures. Range control activities around the world vary in their treatment of SRTRs. Some installations allow soldiers more flexibility with training scenarios, while others restrict firing locations. There have been incidents where range control personnel have shut down training areas for several hours because the SRTR failed to function properly, because the SRTR was considered live ammunition instead of a training round. Many ranges also require units to close the range each time to recover ammunition. These factors can cause delays in



Soldiers in One Station Unit Training and the Infantry Mortar Leader Course train with the SRTR.

TRAINING NOTES

training and make it more difficult.

Ammunition turn-in procedures. The turn-in procedures for SRTR components vary greatly among ammunition supply activities around the world. Some installations require turn-in of all residue, and others require only that the expended ignition cartridge be turned in for accountability. DA Pamphlet 710-2-1, *Mission Training Plan for the Infantry Mortar Platoon, Section, and Squad*, requires that all residue be returned to the ammunition supply point. The interpretation of *residue* may vary between installations. The unit retains the body and fin assembly for future use with the M880/M766 refurbishment kits. A recent change to the technical manuals for the SRTR has made sure that the bodies and fins are classified as metal parts when kept in the unit's area. The Infantry School is in an excellent position to provide standardized instructions to all range control activities on the correct procedures for issue and turn-in of SRTRs.

Lack of requirements to fire the SRTR. ARTEP 7-90 MTP does not mandate the use of the training round

STRAC (DA PAM 350-38)			
ITEM	TRC-A	TRC-B	TRC-C
M766 Cartridges	27	16	07
M766 Kits	240	144	89
M880 Cartridges			
120mm	27	15	09
81mm	30	13	11
M880 Kits			
120mm	243	135	81
81mm	274	101	103

for practice. The DA Pamphlet 350-38 STRAC only allows the substitution of SRTRs for high-explosive rounds. (The Infantry School is looking into the ARTEP issue.)

According to the STRAC authorization, for a four-gun 81mm mortar platoon, each gun is authorized 222 rounds of service ammunition (167 HE rounds, 30 WP rounds, and 25 illumination rounds), a total of 888. For the SRTR, each gun is authorized 30 training rounds, or a total of 120 SRTRs for the platoon. Each gun is also authorized 274 refurbishing kits or a total of 1,096 kits for the platoon. Using all of the authorized SRTRs would more than double a mortar platoon's firing opportunities.

The disadvantages of using the SRTR over service ammunition—the time required to prepare and set up the range to a 1:10 scale, recover the rounds down range, maintain the rounds, and refurbish the SRTR bodies—all have major effects on training time and readiness. But the SRTR is very useful when leaders understand its characteristics and realize how much more training they can conduct by using their full allocations of the M88 and M766 mortar training rounds. In this time of constrained resources, it simply makes good sense to supplement mortar crew training with the short range training rounds. Both the Infantry Mortar Leaders Course and One-Station Unit Training teach students using the SRTR, and now it is time for the rest of the Army to follow their example for realistic, cost-efficient training.

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BOOK REVIEWS



The Dragon Strikes: China and the Korean War: June-December 1950. By Patrick C. Roe. Presidio Press, 2000. 466 Pages. \$34.95. Reviewed by Lieutenant Colonel Michael F. Davino, U.S. Army.

In late November 1950, the United Nations Command launched what became known as the "Home for Christmas" offensive. Despite an earlier clash with Chinese Communist Forces that had left a regiment of the 1st Cavalry Division bloodied in the Eighth U.S. Army zone and a Marine regiment's defeat of a Chinese division in the X Corps zone, the UN Command attempted a massive attack to reunify the Korean peninsula. Within a month, the Eighth Army had been defeated by the Chinese and was withdrawing below the 38th parallel where the war began. In the X Corps zone, the 1st Marine Division had to break out from encirclement and was evacuated by sea to Pusan with the rest of X Corps. In the words of author Patrick Roe, the course of history was changed.

The Dragon Strikes is a close study of the Chinese involvement in the first six months of the Korean War. It is an excellent account and a timely one. Its publication coincides with the 50th anniversary of the war and a time when the potential threat China poses to the United States is under increasing scrutiny.

Patrick Roe, who served as the intelligence officer of a Marine rifle battalion in the Chosin Reservoir campaign, examines in great detail both the Chinese actions against the U.S. X Corps in Northeastern Korea and the defeat of the U.S. Eighth Army at the Chongchon River. He reviews the pre-war situation and analyzes why the Chinese chose to enter the conflict. He covers the deception plan of the Chinese, explaining how they were able to intervene in such a decisive manner while remaining undetected by U.S. intelligence services.

Unlike many authors who tend to hold General of the Army Douglas MacArthur and his G-2, Major General Charles Willoughby, almost solely responsible for the disastrous campaigns in north Korea, Roe describes the role of the Joint Chiefs, the Central Intelligence Agency, and the National Security Council in the debacle. He

explains the complex chain of events that had the national command authorities on the verge of panic, and unable to issue firm orders to MacArthur.

This book will give readers interested in the Korean War an excellent understanding of how the Chinese were able to defeat a technologically superior enemy. It is an excellent addition to the literature available on the so-called "Forgotten War."

The Greatest War. Americans in Combat, 1941-1945. By Gerald Astor. Presidio Press, 1999. 1,056 Pages. 34 Photos. \$39.95. Reviewed by Colonel Christopher B. Timmers, U.S. Army, Retired.

Have you ever encountered a book of fact, of history, that read like fiction? A book with eyewitness accounts whose narrative could almost pass for an outline of a Hollywood action movie? *The Greatest War* will fascinate, enthrall, and amuse you as no other collection of personal recollections can. The accounts of soldiers, sailors, Marines, and airmen are arranged chronologically, extending from Pearl Harbor to the last campaigns in the Pacific and the dropping of the atomic bombs. This book has it all, from a Pearl Harbor survivor who thought the attack was part of an unannounced training exercise, saw an aircraft swoop down to bomb a hangar and initially thought "Boy, is that guy going to get in trouble" to the young infantryman in the 7th Division who was knocked off his feet by an exploding mortar round and moments later found that he could detect no wounds, other than "several feet of pink tubing" lying alongside his leg. And each chapter contains an overview by Astor in which he discusses the conduct of the war up to that particular time and offers insight into the politics, personalities, and strategies of a given theater.

It is easy to recall the enthusiasm Tom Brokaw's book *The Greatest Generation* met when it first hit the store shelves in 1998. At last someone, a celebrity at that, had taken the time to recognize the generation that fought and saved democracy as we know it. Brokaw followed his first book with another, *The Greatest Generation*

Speaks, and it is more in this vein that *The Greatest War* is written. But Astor doesn't dwell on himself or tell us about his family then, as Brokaw does in his first book. His text is devoted solely to the fighting men and women who won the war, their experiences, their laughter, their sorrows. Astor is simply a messenger in the service of a generation that was great indeed.

Unlike Brokaw, Astor is a World War II veteran. In soliciting memories and conducting interviews, he speaks to people who are his contemporaries, and they return the favor with fascinating, and often hilarious, recollections. His book runs to just over 1,000 pages, is more complete, more moving, and better written than Brokaw's. It is a long work, and Astor could have interviewed fewer veterans, covered major campaigns only through their highlights, or relied heavily on other histories. In other words, he could have written a shorter work. We can be thankful that he didn't.

Proud Legions: A Novel of America's Next War. By John Antal. Presidio Press, 1999. 398 Pages, Photographs. \$27.50. Reviewed by Major Dominic J. Caraccilo, U.S. Army.

Although *Proud Legions* is a work of fiction, the area of operations in which the combat occurs is real. The routes, terrain, towns, firing ranges, and obstacles conveyed as critical to the proposed war actually exist. Even the units portrayed and the technology existing in those organizations are accurate. Colonel John Antal, a U.S. Army armor brigade commander and an esteemed master of focused, decision-making story telling and strategy assessment, truly captures the essence of modern land combat in *Proud Legions*.

In fact, what Antal does in this book is to propose for us a credible scenario of the way a future war with the North Koreans might play out. It is a threat assessment and a proposed literal war game of sorts. If you have driven the highways south from Panmunjom to the capital city of Seoul, you will be riveted by Antal's narrative.

Entwining the story-telling capabilities of Harold Coyle and Tom Clancy with the

relevant futuristic theories of the likes of George Friedman and John B. Alexander, Antal offers us a technically accurate, plausible premise for the way the next war on the Korean Peninsula might start and consequently unfold. Anyone with even a remote understanding of the situation in the "land of the morning calm" will appreciate Antal's grasp of the precarious condition facing the vulnerable U.S. and Republic of Korea forces in South Korea.

Antal begins *Proud Legions* with a detailed summary of the capabilities of the M1A2 Abrams main battle tank, which sets the stage for the tank warfare about to unfold in the coming chapters. He then masterfully interjects a summary of the North Koreans' intent and objectives; again, all very plausible, given the current state of forces on the Peninsula. Subsequently, he offers us a cast of characters so realistic that anyone on active duty would swear that he has met those people and knows them well. The final chapters portray the full-scale war that the United States and South Korean governments have long expected.

While war against North Korea has been in the offing for the past half century, no one has been able to depict, in the literal sense, the full range of possibilities of how it might start and why and how it might end. This book has met that challenge. While the novel is riveting and immensely entertaining, it is, at the same time, more of a "warning order" to the decision-makers in Korea. Let's hope we can heed the message.

After the Trenches: The Transformation of U.S. Army Doctrine, 1918-1939. By William O. Odom. Texas A&M University Press, 1999. 82 Pages. Reviewed by Lieutenant Colonel Albert N. Garland, U.S. Army, Retired.

If you think the U.S. Army is in less than good shape today, read this book. If he does nothing else, William O. Odom, the author and active Army officer, clearly points out that conditions could be a lot worse.

No one in his right mind, of course, wants to take the Army back to the situation it was in during the 1920s and 1930s. To give you just a little idea of what it was like to serve in that Army, consider the following, which was written by George C. Marshall about a personal experience:

During this period I commanded a post which had for its garrison a battalion of infantry, the basic fighting unit of every army. It was a battalion only in name, for it could muster barely 200 men in ranks when every available man, including cooks, clerks

and kitchen police, [was] present for the little field training that could be accomplished with available funds. The normal strength of a battalion in most armies of the world varies from 800 to 1,000 men.

Odom begins his discussion of the development of doctrine by outlining the major provisions of the National Defense Act of 1920 and its requirements. That act, by the way, gave us the basic military organization we have today: a relatively small but combat-ready Regular Army with a variety of missions. The chief mission was to train the two major civilian components: the National Guard and the Organized Reserves. The Regular Army's other missions were to garrison our overseas possessions and to be ready for immediate employment as required. Part of the latter mission involved manning our coastal defenses.

With this act in hand, the Army's leaders began preparing doctrine to guide the force in the coming years. Odom discusses doctrine in general, why it is necessary, and how it should be developed. He stresses the fact that "most large armies publish a basic capstone manual that describes how the force will fight." Then, they generally prepare supporting manuals that emphasize the major points found in the capstone volume.

In this book, Odom is concerned with how the Army's leaders prepared two capstone doctrinal volumes—Field Service Regulation 1923 (FSR 1923) and FSR 1939. Why FSRs? The Army's first true doctrinal manual, as we know that term today, was published in 1905 as FSR 1905. But since doctrine is ever-changing (too often, perhaps, only to satisfy the whims of an influential flag officer), capstone manuals usually do not last long. FSR 1905 lasted only three years; its successor, FSR 1908, for the same length of time. And so on until FSR 1923 appeared; this one remained as the Army's capstone doctrinal manual for 16 years, until FSR 1939 appeared, although the latter came out in tentative form because of much in-house fighting over its contents.

The thought behind the writing of FSR 1923 constitutes the first half of this book, and the preparation and writing of FSR 1939, the second half. Odom believes FSR 1923 was a superior work while FSR 1939 was not, and dissects each one in detail.

Did the Army, as a whole, feel the effects of these publications? I don't believe either reached far down the chain, probably stopping at the various service schools. Odom does not make this point clear. But I cannot believe that Marshall, with his understrength and underfunded battalion on a post he probably had difficulty maintaining prop-

erly, was overly concerned with implementing either FSR or resulting manuals, since few of the latter were ever published and those that were had limited distribution.

Unfortunately, the Army was in such poor condition during those decades, with 1934 being the low point, that it could do little to implement the FSRs, particularly FSR 1923. The service schools did their best to teach the new doctrine, but even they were limited by a lack of funds. Still, Odom thinks, and I agree, that the service schools were among the few bright spots during those generally dark years. He holds up the Infantry School when Marshall was its assistant commandant as representing "the school system at its best." Unfortunately, while he mentions the School's publication *Infantry in Battle*, a project begun by Marshall but completed after he had gone on to another assignment, he does not mention the *Mailing List* (now *Infantry*), the School's own periodical, which went through several iterations but always tried to give infantrymen in the field useful material.

I believe Odom could also have recognized some of the far-thinking activities of units in the field. The 2d Infantry Division, in the San Antonio area, was conducting actual airborne operations, although on a small scale, as early as 1927. And in Panama, in 1931, a battery of field artillery was moved by air from one side of the zone to the other. Odom does recognize that the War Department did not consider airborne operations of much importance, even after studying such operations being conducted by the Soviets and Germans. Perhaps he was wise to omit our own efforts, particularly since they were probably conducted without War Department approval.

None of this criticism detracts in any way from my good feelings about Odom's efforts. I believe, as he does, that "The Army's experience with doctrine development during the interwar years offers useful insights for today's leaders as they face the challenge of modernizing organization and doctrine in peacetime."

The Heat of Battle: The 16th Battalion, Durham Light Infantry—The Italian Campaign, 1943-1945. By Peter Hart. Leo Cooper, 1999. 224 Pages. \$30.00. Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army, Retired.

The Italian campaign of World War II—from the Salerno landings in September 1943 until its successful conclusion in May 1945—was a long, grim grind through inhospitable, rugged terrain that permitted the

highly skilled German enemy to defend in depth. It was a difficult, challenging infantryman's campaign, requiring small units with good leadership, superb training, effective discipline, and high morale.

One of the many Allied units that fought in Italy was the British Army's 16th Battalion, Durham Light Infantry (DLI). Organized after the 1940 Dunkirk debacle, the 16th DLI deployed to North Africa in January 1943 and experienced its baptism of fire the following month at the Battle of Sedjenane. The 16th DLI, as an element of the British 46th Division, was in the second wave assaulting the Salerno beachhead on 9 September 1943. After footslogging its way up the Italian Peninsula, fighting through the interminable misery of ridges, rivers, rain, and mud, the 16th DLI participated in the breaking of the heavily defended Gothic Line. In December 1944, to fill the vacuum caused by the German withdrawal from Greece, the 16th DLI and other units were airlifted to the vicinity of Athens and soon afterward became embroiled in counterinsurgency operations. The battalion returned to Italy in mid-April 1945, but the war in Europe ended before it could be committed again to battle.

In 1986—40 odd years after the end of World War II—more than 200 former wartime DLI soldiers began recording their combat reminiscences in a collaborative program with the renowned Imperial War Museum. Editor Peter Hart, Oral Historian at the museum, chose "some of the most evocative extracts from those 30 interviews that concerned the 16th Battalion DLI in the Italian Campaign of 1943-1945 and linked them together within a broad historical context." These personal vignettes of combat in Italy highlight the thoughts, fears, trials, and tribulations of officers and enlisted soldiers of all ranks in the battalion, from privates to the battalion commander.

Oral histories, while frequently interesting and thought provoking, need to be read and assessed with a critical eye. The passage of four decades can have a significant effect upon recollections, with memories becoming tainted, embellished, or selective. The author should have provided more "contextual" background information and comprehensive transitions between accounts, and better identified individuals and places mentioned in the various accounts. The book is lavishly illustrated, and five maps supplement the text.

The Heat of Battle describes, through its transcription of oral accounts of combat participants, perceptions of the reality of combat in the somewhat neglected Italian

campaign. It also provides considerable insight into the human element of leadership—including fear, fatigue, and morale—and the dynamics of an Allied infantry battalion at war. This is an interesting and worthwhile book, a fitting tribute to those 16th DLI soldiers who overcame all obstacles in pursuit of victory.

***Unheralded Victory: The Defeat of the Viet Cong and the North Vietnamese Army, 1961-1973.* By Mark W. Woodruff. Vandamere Press, 1999. 338 Pages. \$24.95. Reviewed by Dr. Joe P. Dunn, Converse College.**

Unheralded Victory complements a recent spate of books, the best of which are Michael Lind's *Vietnam: The Necessary War* and Lewis Sorley's *A Better War*, which attack the myth that the U.S. military was defeated by the communist forces in Vietnam. The respective authors stress that U.S. forces defeated the enemy in the field; nevertheless, victory was not achieved. The thesis is unquestionably correct, but the real issue that separates scholarly analysis from polemic is the way each author explains the reason for failure.

Mark Woodruff served with the 3d Marine Regiment in Vietnam, and later moved to Australia where he holds a reserve commission as a lieutenant commander and practices as a psychologist with the Royal Australian Navy and the Vietnam Veterans Counseling Service in Perth, Western Australia. Drawing exclusively on printed sources, especially first-person memoir accounts, he briefly traces the U.S. campaign against the Viet Cong and the North Vietnamese Army, which he discusses separately. He also incorporates the role of the Australians into the account.

The crisp, tight, interesting narrative serves as a good survey of the military campaigns of the war for the novice reader. And Woodruff makes a spirited case for his thesis. He concludes that for Vietnam veterans "full credit must be given them for their magnificent performance.... In their victory, which to this day remains unheralded, they annihilated forever the Viet Cong and soundly defeated the North Vietnamese Army."

The final third of the book is devoted to what the author considers other myths of the war and the continuing *dich van* campaign of misinformation. Although he makes some interesting and valid points, his own finger-pointing and selective use of evidence and quotations put the book—unlike Lind's and Sorley's—more in the polemical than

the scholarly camp.

Although I found the book useful and quite engaging, the anecdotal development of the thesis is simplistic, and the author is also guilty of his own myth perpetuation. His argument contains elements of truth, but to declare military victory over the communist forces is superficial, naïve, and—to invoke the famous rejoinder made to Harry Summers when he first ventured this interpretation to a North Vietnamese general—"it is also irrelevant." The novice reader will find some valuable statistical and explanatory detail, but one should treat the larger purpose of the book with the same skepticism that Woodruff demands of competing interpretations of the war.

***The Military Memoirs of General John Pope.* Edited by Peter Cozzens and Robert I. Girardi. University of North Carolina Press, 1998. 287 Pages. \$34.95. Reviewed by Major Don Rightmyer, U.S. Air Force, Retired.**

General John Pope may be best known for his unsuccessful command of the Union Army of Virginia that faced Stonewall Jackson and was soundly defeated at the battle of Second Manassas (or Second Bull Run) in August 1862. There was a great deal more of merit and significance to the general's life, but that is the single event for which he has become best known. In 1990, authors Wallace Schultz and Walter Trenerry wrote a biography of Pope (*Abandoned by Lincoln*), in which they described him as the "only commanding general of a major Union army in the Civil War not to have [a biography]." Their work after many years of research was based on a man who had kept no diary, whose surviving letters were scarce, and who had only one extant article that they could locate.

This book, *The Military Memoirs of General John Pope*, is a rare new addition to the military leadership biographies of the Civil War. Pope's personal reminiscences were recently discovered by a well-known contemporary historian of the Western theater of the war, Peter Cozzens, in which General Pope has published his own recollections of service in the Civil War as well as his pre- and postwar days in the U.S. Army. The serialized writings had been published in the late 1800s in the *National Tribune*.

A large part of this book deals with Pope's personal experiences at the battles of Corinth, Island No. Ten, and Cedar Mountain. Of course, one major section of his recollections in the book deals with the battle of Second Bull Run. Despite the rough

treatment and criticism that Pope received after his defeat in Virginia and the harsh treatment given him following the war, his discussion of military campaigns and fellow soldiers is very even-handed. One will not find here the kind of vociferous discussion of others that might have been expected.

It is probably unlikely that additional collections of first-person recall such as this one will be found in published sources such as the *National Tribune*. That is regrettable for many of the Civil War leaders for whom research sources are minimal, but such a finding as Pope's *National Tribune* collection of articles is remarkable in the late 20th century. This book is a very interesting and worthwhile addition to our current published history of the Civil War.

A Great Civil War: A Military and Political History, 1861-1865. By Russell F. Weigley. Indiana University Press, 2000. 624 Pages. Reviewed by Colonel Cole C. Kingseed, U.S. Army.

The U.S. Civil War, 140 years after its beginning, remains the defining event in American history. To military historian Russell Weigley, the conflict defines the national mythology from which Americans draw the understanding of their national character. In what is likely to become the definitive single-volume military and political history of this country's bloodiest conflict, Weigley has produced a superb monograph that rivals James McPherson's epic *Battle Cry of Freedom*.

Weigley views the war as essentially a political conflict characterized by uncontrolled violence. What makes this book indispensable is the author's assessment of the deficiencies in strategic thinking and the inability of either side to develop a war-winning strategy before the war's final stages. Noting how fast the Confederacy collapsed in 1865, Weigley also questions whether the South really represented a true nationalist movement. It is in his willingness to challenge the conventions of history that his book makes its greatest contribution.

The author also provides a provocative analysis of generalship from both Union and Confederate perspectives. Noting Ulysses S. Grant's mastery of the intricacies of maneuver warfare, it is hardly surprising that Weigley views Grant as the most capable general of the war. Grant's protégé William Tecumseh Sherman emerges from these pages as a ruthless commander intent on employing a strategy of abject terror to break the enemy's will to continue the struggle. As for Confederate General James

Longstreet, traditionally the scapegoat of Gettysburg, Weigley states that his reputation for sluggishness is at least partly undeserved.

Weigley also gives high marks to Robert E. Lee, noting that the Confederate chieftain's penchant for the tactical offensive may have bled the Confederacy white, but Lee was correct in devising a realistic strategy that gave the South its only real chance of winning the war. Lee determined that the decisive theater of the war lay in the Washington-Richmond area and that time was a principal factor working against Southern independence. In this assessment, Weigley takes offense at current historiographical trends, such as Alan Nolan's *Lee Considered*, that fault Lee's strategic ability. As for tactics, Weigley notes that no other military commander since Napoleon has surpassed, or ever would surpass, Lee's exercises in Napoleonic battlefield tactics at Second Manassas and Chancellorsville.

In the political realm, Weigley believes that the presidential election of 1864 had little effect on the prosecution of the war. The Union military victories of Mobile Bay, Atlanta, and Cedar Creek had carried the Confederacy so far toward military collapse by November that the election of McClellan could hardly have prolonged its existence much beyond the new year. Abraham Lincoln was already on record as intending to spare no effort to win the war before the inauguration of a new president. An obvious admirer of Lincoln, Weigley also chastises Jefferson Davis for not ending the war and preventing the further bloodshed once all chances of Confederate victory had vanished under the coordinated onslaught of Union armies.

Was the war worth the carnage? Weigley answers in the affirmative, noting that the war provided the only formula that could end the institution of slavery. Even Lincoln's assassination served to reveal the true nature of the war as stark tragedy. With 620,000 deaths and 1,078,162 casualties, Weigley surmises that one in three members of the war's armed forces was killed or wounded during the course of the war.

In the final analysis, this book is the most comprehensive military and political history of the conflict to date. The Civil War demonstrated the nation's capacity for change, as the Northern vision of nationhood emerged as the American vision. As Lincoln so eloquently expressed it at Gettysburg, the Civil War involved a new birth of freedom as the United States rededicated itself to the attainment of human equality.

RECENT AND RECOMMENDED

The U.S. Army and the Texas Frontier Economy, 1845-1900. By Thomas T. Smith. Texas A&M University Press, 1999. 307 Pages. \$34.95.

Security with Solvency: Dwight D. Eisenhower and the Shaping of the American Military Establishment. By Gerard Clarfield. Praeger, 1999. 288 Pages. \$59.95.

Eye in the Sky: The Story of the CORONA Spy Satellites. Smithsonian Institution Press, 1999. 303 Pages. \$17.95, Softbound.

Lee the Soldier. Edited by Gary W. Gallagher. Hardcover published in 1996. University of Nebraska Press, 1999. 692 Pages. \$19.95, Softbound.

Roots of Strategy. Book 4. Edited by Colonel David Jablonsky. Originally published in 1940 by Military Service Publishing Company. Stackpole, 1999. 544 Pages. \$19.95, Softbound.

Thank God and the Infantry: From D-Day to VE-Day with the 1st Battalion, The Royal Norfolk Regiment. By John Lincoln. Originally published in 1994. Sutton Publishing, 1999. 240 Pages. \$22.95, Softbound.

The Vietnam War Almanac. By Harry G. Summers. Originally published in 1985. Presidio, 1999. 432 Pages. \$24.95, Softbound.

A Time Remembered: American Women in the Vietnam War. By Olga Gruzhit-Hoyt. Edited by E.J. McCarthy. Presidio, 1999. 272 Pages. \$27.95, Hardcover.

Gunfire Around the Gulf: The Last Major Naval Campaigns of the Civil War. By Jack Coombe. Bantam, 1999. 288 Pages. \$23.95, Hardcover.

Pegasus Bridge & Merville Battery: British 6th Airborne Division Landings in Normandy D-Day 6th June 1944. Battleground Europe Series. By Carl Shilleto. Combined Publishing, 1999. 208 Pages. \$16.95, Softbound.

Joshua Chamberlain: The Soldier and the Man. By Edward G. Longacre. Combined Publishing (P.O. Box 307, Conshohocken, PA 19428), 1999. 395 Pages. \$29.95, Hardcover.

Cold Beach: Inland from King—June 1944. Battleground Europe Series. By Christopher Dunphie and Garry Johnson. Combined Publishing, 1999. Leo Cooper, Pen Sword Books Ltd. (47 Church St., Barnsley, South Yorkshire S70 2AS), 1999. 160 Pages. \$16.95, Softbound.

Jochen Peiper: Battle Commander, SS Liebstandarte Adolf Hitler. By Charles Whiting. First published in Great Britain by Pen Sword in 1986. Republished in this revised edition by Combined Publishing, 1999. 194 Pages. \$29.95, Hardcover.

Combat Leader's Field Guide. 12th Edition. By MSG Brett A. Stoneberger. Stackpole, 2000. 368 Pages. \$13.95, Softbound.

Blood Brothers: Hiram and Hudson Maxim, Pioneers of Modern Warfare. By Iain McCollum. Chatham Publishing (60 Frith St., London W1V 5TA), 1999. 224 Pages. \$36.96, Hardcover.

The Boston Campaign: April 1775–March 1776. Great Campaigns Series. By Victor Brooks. Combined Publishing, 1999. 253 Pages. \$27.95, Hardcover.

Polygon Wood: Ypres. Battleground Europe Series. By Nigel Cane. Imprint of Pen Sword Books Limited (47 Church Street, Barnsley, South Yorkshire S70 2AS), 1999. 176 Pages. \$16.95, Softbound.

From the Editor

REINFORCING THE BASICS

As we move into the Army Transformation, we will be looking at enhanced lethality, greater survivability, and degrees of mobility and flexibility that were unheard of two decades ago. The restrictions imposed by the terrain and road and bridge infrastructure will be less significant, and in most areas of the world we will enjoy the same freedom of maneuver as indigenous forces. In other words, we can get to the fight faster, with greater firepower, and in better shape than at any time in history. But that's only the beginning.

The important thing is what happens once we hit the ground, when the infantry fight begins. This is when the training pays off. Good, hard, demanding training that our soldiers have practiced over and over until it is almost sheer reflex. This is when battle drills, marksmanship, fire and maneuver, and good, old-fashioned combined arms cooperation will carry the day. In talking to World War II and Korean War veterans who were in it for the long haul—men who knew they were there until the fight was over, one way or another—two points come up more frequently than any others: training and the use of artillery. In combat, they and their buddies did exactly what they had learned in training, including maintaining the weapons and equipment upon which their lives would depend. Those who had learned their lessons well did what was expected of them, and those who had failed to learn—or who had been permitted to get by with substandard skills—did not fare as well. The other recurring theme in these vets' accounts is the reliability of—and their reliance upon—American artillery. Every leader in the chain should know how to request and adjust indirect fires. And our field artillery is the best in the world.

And while we're at it, let's not forget our logistical responsibilities. Maintenance and supply are big subsets of logistics, and—whatever vehicles are chosen to transport the infantry force into battle—we must be trained, manned, and given the materiel resources to keep 'em running and shooting. In a peacetime environment, the subject of logistics may not start the blood pounding in our temples, but the prospect of running short on ammunition, fuel, and food in the heat of battle is guaranteed to be an attention getter. We have the best logisticians in the world, and the systems are in place to sustain any operations we can envision, but we cannot expect the supply, transportation, and medical units to read our minds. They can anticipate some of our needs, but we need to fill in the details so they can be there with the right stuff at the right time. Our soldiers have every right to assume that they will be supported and sustained in the best way possible, and by thorough prior planning we can make sure that we don't let them down.

The Herculean achievements of the 22d Support Command and its subordinate units during Operations *Desert Shield* and *Desert Storm*, during the defense and restoration of Kuwait, and finally throughout the redeployment of U.S. forces out of theater set the standard for future support to deployed U.S. forces. In addition to the staggering combat losses they sustained at the hands of Coalition forces, the Iraqis tried to conduct extended operations with little or no consideration of the logistical implications and lost their collective shirt. These are the basics: tough, realistic training and detailed logistical planning. This is not the time to fall into the trap of parochialism and waste time and resources we can ill afford on arguing whose branch is the most important. We all know the rules of the game; if the team loses, we all lose. But when the team wins, we—and the nation—will have accomplished what we are sworn to do, and that is what it is all about.

RAE

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